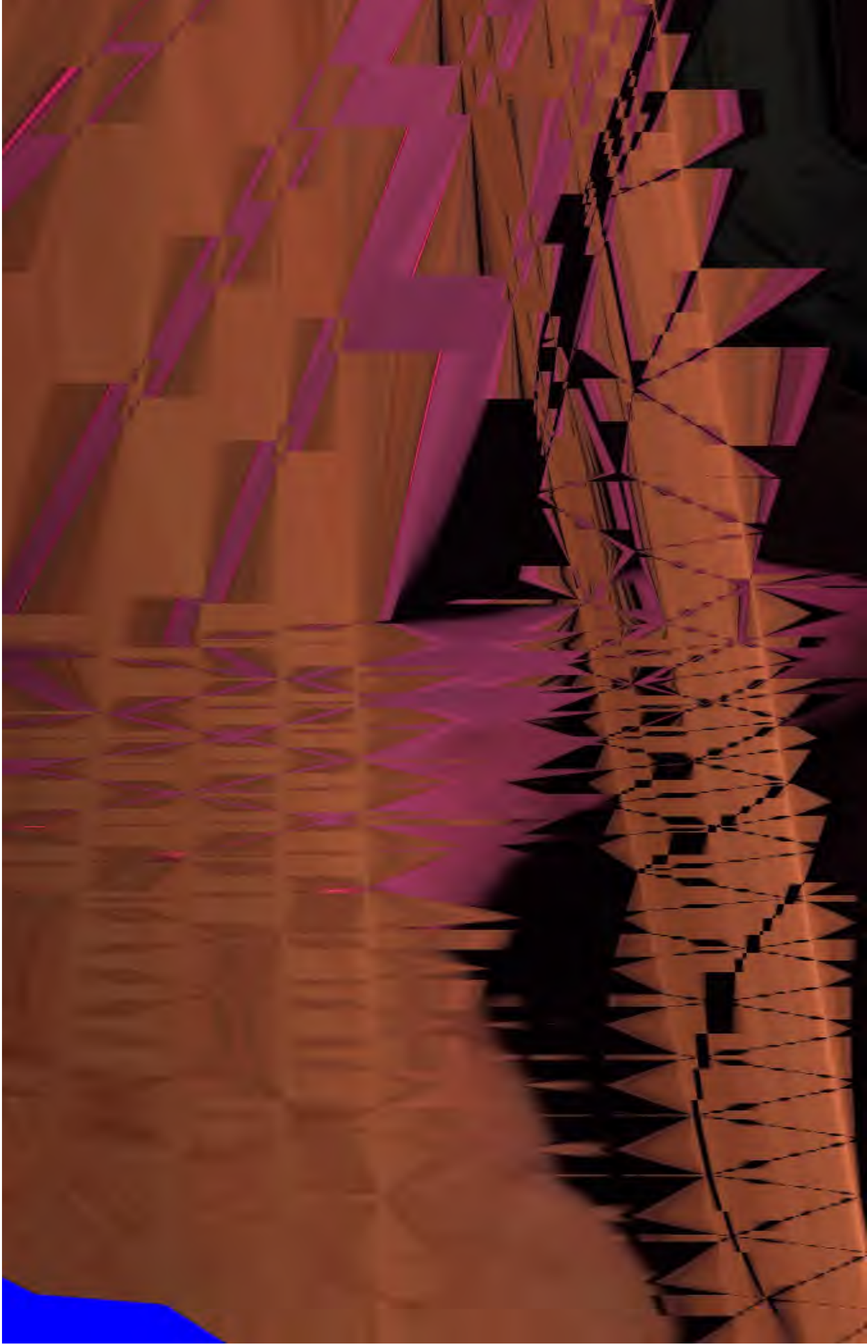



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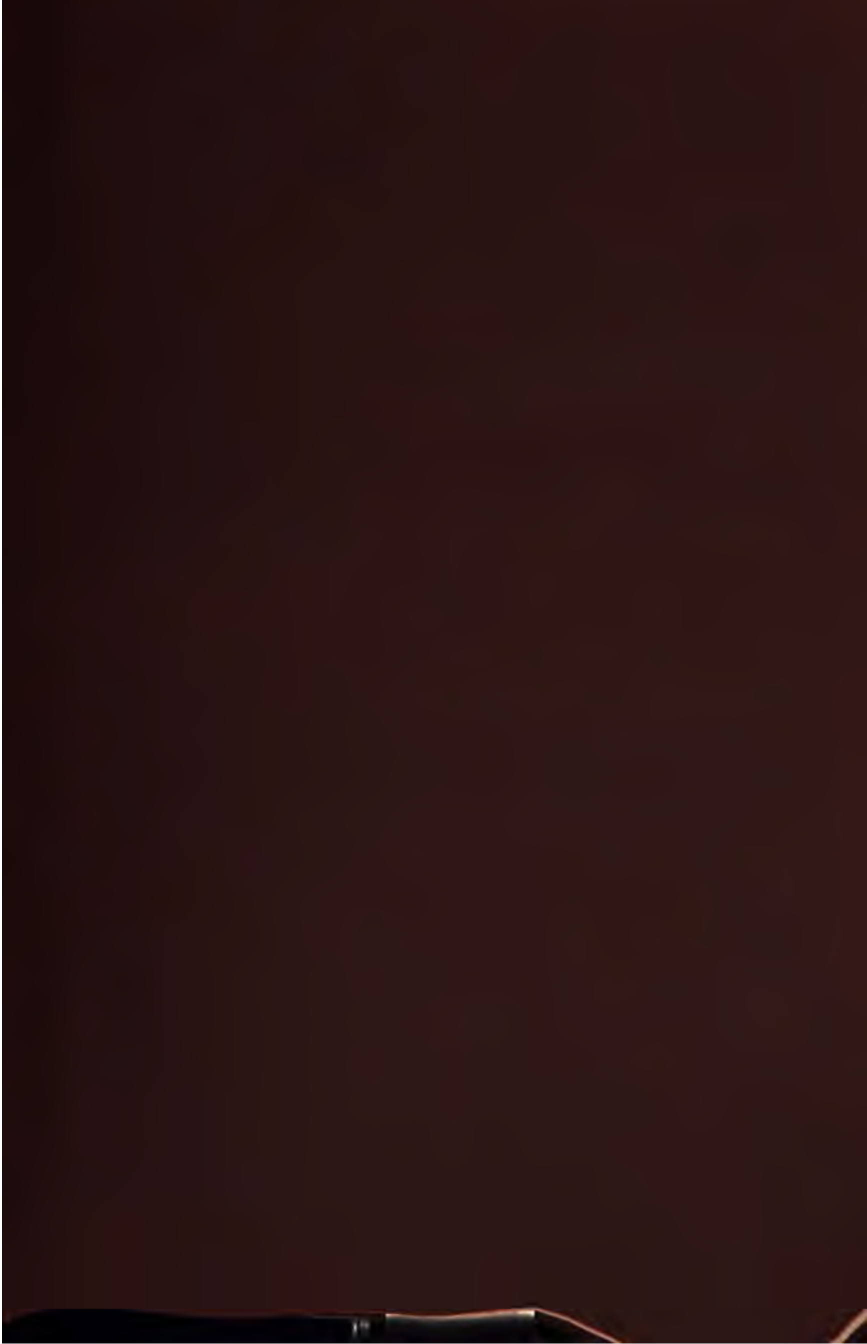
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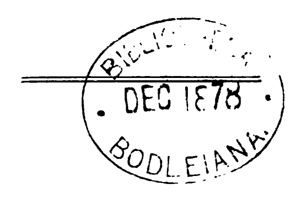


PHILOSOPHICAL FRAGMENTS

Written during Intervals of Business

BY

J. D. MORELL, LL.D.



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PREFACE.

THE following 'Fragments' have been written, either wholly or in part, at various intervals during the last ten or fifteen years, chiefly as affording a little intellectual recreation and some change of Ideas from the ordinary duties of school inspection. They follow, for the most part, the lines of thought I had previously taken up in my *Historical and Critical View of the Speculative Philosophy of Europe in the Nineteenth Century*, and subsequently in my *Introduction to Mental Philosophy on the Inductive Method.*

A portion of Chapter IV. appeared in an article written for the '*Manchester Papers*,' and also from a translation I wrote and published of a small work on psychology by Prof. Fichte, then of Tübingen. With this exception, the matter is entirely new.

Since the *Historical and Critical View* was written, a great change has passed over the whole complexion of European thought. The revolutions which began in France just before the middle of the century, and which passed throughout Europe like a great political storm, left an indelible impression upon the whole current of European literature. In France, the period of Louis Philippe was distinguished by great intellectual activity, more especially in the department

of philosophy. On the side of Eclecticism there were Cousin, Jouffroi, Jules Simon, Damiron, Barthélemy St. Hilaire, and a host of others, all striving to combat the reigning materialism and bring back the current of philosophic thought into more spiritualistic channels. Opposed to these stood the school of positivism as fashioned by Comte and expounded by Littré. On the side of Sociology the school of Fourier was then in the ascendency, and numbered men of the highest ability amongst its expounders. All these lights, which were guiding the national mind in the research of truth, were extinguished by the revolution that led to the Second Empire, and never reappeared as a popular influence.

The succeeding revolution in Germany had much the same effect. Hegelianism had just then reached the summit of its glory, and in the hands of the '*Jung-hegelianer*' was showing symptoms of a reaction towards the opposite pole of thought. The political agitation achieved the entire overthrow of that form of idealism which had been a power in the country ever since the time of Fichte. It sank away not under the blows of adverse controversy, but under the more killing effects of popular indifference; and since that time no reigning school of thought has sprung up to take its place. In the following pages the fortunes of the modern school of German philosophy are briefly traced, and their history brought down to the present day. This forms the subject of the first part.

The chief feature of the philosophy of the present is the tendency everywhere shown to bring all human investigation into the *form* of natural and inductive science, and the

question naturally arises—whether the inductive method is not, after all, the real and proper method for the human intellect to follow even in the most recondite and metaphysical researches. The purport of the chapter on the theory of human knowledge, which is marked as Part II., is mainly to expound and confirm this one idea.

Part III. is an attempt to show the application of some of the modern doctrines of psychology to the principles of education. It consists of three lectures which were intended to be delivered to an association of teachers and educationists, but from a variety of circumstances never were delivered, at least in the form here presented. The fact of their having been written for the ear rather than the eye, will account for the style being more 'oratorical' than would have been natural and proper in a purely didactic treatise.

This, then, is a brief inventory of the matter contained in the following 'Fragments.' They are now published with the hope that they may be of some interest to the few who shall continue to devote attention to the most unpopular of all the sciences.

J. D. MORELL.

FOLKESTONE, 1878.

CONTENTS.

PART I.

HISTORY OF PHILOSOPHY.

PART II.

METAPHYSICS.

PART III.

PSYCHOLOGY APPLIED TO EDUCATION.

POSTSCRIPTUM.

PART I.

HISTORY OF PHILOSOPHY.

PHILOSOPHICAL FRAGMENTS.

CHAPTER I.

Historical Outline of the Rise and Progress of Philosophical Speculation.

MAN in his undeveloped and uncivilized state is governed, like the lower animals, wholly by his instincts and passions. His sole object is to gain the necessary means of subsistence, and, while doing so, to gratify all his natural appetites. Placed in the midst of the most striking objects of nature, he does not regard them at first with any kind of intelligent interest, but views everything around him merely as it adapts itself to his physical wants and enjoyments.

This instinctive condition of life may last indefinitely long, and in the case of many tribes of mankind has never yet been overcome. In the more favoured races, however, it has always given way, after a certain period of struggle, to an incipient civilization; and these races have thus become elevated one step towards a higher and more intellectual state of existence.

On emerging from barbarism, men are soon led, by necessity or self-interest or the force of instinct, to unite themselves under some primitive form of government, and practise some rude kind of religious worship. As a consequence of this, they are held back from the unbridled sway of their impulses and passions *by fear*—fear of the law under which they live in society, and fear of the superior powers whom they are taught to worship or appease. We see here

accordingly the first elements of moral culture, consisting, as it does, in a twofold restraint, that of *religion* and *law*.

The next step in the natural history of civilization is what we may designate the *poetic* stage of development. No sooner does nature cease to be simply the minister to man's physical necessities, than she begins to strike the mind with wonder and admiration. The sense of natural beauty once awakened, the tide of æsthetic culture sets in. Religion passes from mere fetishism into the worship of nature; language becomes moulded into a metaphorical richness of expression; poetry makes its appearance, celebrating the actions of heroes, and reflecting (as in the Homeric verse) the most striking phenomena of nature in rhythmic song. Thus, in process of time, artistic genius bursts forth, and the national life reaches a high degree of youthful exuberance.

But after a time another phase of human civilization, in its turn, appears. The *intellect* gains step by step on the imagination, and man, in place of admiring, desires to *comprehend* the world in which he lives. The *power* of thinking once acquired, the *necessity* of thinking grows out of it, and this necessity it is which ushers in the era of *philosophy*.

If we cast our eye over the page of history with the design of fixing the period in which the spirit of philosophy was first awakened, we have to pass by many generations, and leave behind us many centres of infant civilization. The ancient oriental world, in fact, never reached the philosophic stage of development at all. It produced law, government, ethics, poetry, religion, but not science. It contemplated nature and humanity as a wondrous enigma, but it never had the energy of mind, in the purely *intellectual* sense, to propose a rational solution. The first great awakening of the pure spirit of intellectual inquiry took place among the Greeks. It was they who first confronted the problem of the universe, and essayed to resolve it. The desire to do this was termed in their own language *Philosophia*, the love of wisdom; and from that hour philosophy has had a *history* in the world, reaching down in one unbroken line to the present age. The history of philosophy divides itself naturally into three main periods—the ancient, the middle age, and the modern.

In seeking for the commencement of philosophy in ancient Greece, we are not to look by any means for an immediate separation of the poetic and religious elements from the speculative. This could only take place after many years of mental effort. For a long time the language of poetry still remained the only language of philosophy; and the longing of the mind after religious satisfaction was mingled up insensibly with the desire for intellectual completeness. All we have at first to expect is some well-defined effort in which the imagination and the religious feelings are held clearly *subordinate* to the rational exposition of physical or mental phenomena.

The first attempt of this kind is universally ascribed to the effort made by Thales to discover a primary element in nature. There is a passage in Goethe's *Treatise on the Theory of Colours*, which exactly expresses the character of this primitive school of Grecian speculation. 'The Greeks,' he remarks, 'who came over from the region of poetry to that of physics, retained for a time even there their poetical character. They looked upon objects in a concrete and living point of view, and felt constrained always to utter the impressions of the present moment. When they sought to free themselves from this by abstract thinking, they were perplexed (as every one else is) how to represent and explain these phenomena of sense to the understanding. The sensuous accordingly was explained by the sensuous, one phenomena by another of the same kind. They found themselves thus in a kind of circle, and pursued the inexplicable round and round it.'

In other words, the senses and the understanding were both *equally credited;* the intimations of both were accepted with a like trusting faith, and no attempt was made to reconcile any apparent contradictions. The idea of a philosophical *method* was not yet known, and the very simplest criteria of truth and falsehood were unthought of.

Under the teaching of Pythagoras, this state of things soon came to an end. It soon became evident that there *must* be some kind of *method* employed in the study of nature, but what that method ought to be it was not easy to decide. The only example which at that early period

existed of a perfectly consecutive system of ideas, in which one truth, followed by a necessary consequence from another, was seen in the science of *numbers.* The relations of numbers, we know now, are the simplest of all relations, and consequently are those which must inevitably be first brought into the form of a connected science. Hence it was not unnatural that Pythagoras should regard the process of numerical calculation as representing the *whole* method of intellectual research, and should affirm that the study of nature must itself rest upon the principles of number and proportion. Something like a rational method being once excogitated, it was sure to be applied at first to every branch of human effort.

In the next great school of Greek speculation,—I mean the Eleatic,—this Pythagorean principle was put to the test, and broke down. It was soon found that the nature of *things* is far from being exhausted by the relations of number and proportion; so that numerical ideas must either be made to stand for something totally different from what they originally indicate, or the mathematical method must be abandoned altogether in the study of nature. The attempt of Parmenides to build up a whole system of absolute knowledge upon the *one* and the *all*, however imposing, yet led, as a necessary consequence, to the separation between *sensuous* and *rational* knowledge, between science (*i.e.* arithmetic) and philosophy. The phenomena which nature presented were too striking and important to be wholly laid aside, while the reason was seeking for truth in mere abstractions; and had not the attractions of *deductive certitude* been too great, the active mind of Greece might easily, even thus early, have been led into the fruitful pathway of *inductive investigation.*

As it was, the prevailing tone of the Greek intellect took the other road; it sought for truth by means of deductive processes; it laboured to find the way in which one idea could be inferred with absolute certainty from another; and hoped to come to some fixed philosophic conclusions by this distinctive method. Thus, while the sophists abused the principle of deduction, and strove to show how, by a clever handling of ideas, you can draw forth any conclusion

you please, Socrates, on the other side, turned his eye inwards, and sought to fix, by indisputable canons, the unerring principles by which truth—truth unmixed with error —can be arrived at and established.

Socrates himself started as a sophist; but there was in his nature that deep moral earnestness which led to the conviction that truth and duty were not an idle play of words, that sophistry was not synonymous with *wisdom.* The ordinary sophists, carried away by the principle that all scientific knowledge consists in the deductive handling of ideas, had arrived at the conclusion 'that man is the measure of all things;' that there is no truth apart from words; and that it depends entirely upon the skill of the individual what turns out to be truth or falsehood *for him.*

Against these principles, so absolutely destructive of all morals and all belief, Socrates opposed the whole force and vigour of his genius. He advocated the existence of a *real truth*, apart from all human reasonings, and persuaded his countrymen to the steady pursuit of it. But how was he to extricate himself from the meshes of acute sophisms in which the artful reasoners of the day were accustomed to involve their opponents? To meet this case, he invented what is usually called the *Socratic dialogue*, a method of reasoning in which he strove to force his opponents to the confession of certain fundamental principles, and then drew from those principles, with irresistible force, the conclusions he desired to inculcate.

It will be seen, accordingly, that Socrates followed, like all the rest of his contemporaries, the *deductive* method, and sought to evolve truth from *an elaboration of ideas.* But *unlike* the sophists of the day, he insisted upon two things: first, a perfectly clear definition of ideas; and, secondly, a strict habit of keeping within those definitions when once made. In these two canons lay the whole gist of the Socratic method of philosophy.

But in order to apply these canons accurately, much more than their mere *assertion* was necessary. To get a perfectly *clear* definition of ideas, for example, demanded a knowledge of the laws of thought, and of the manner in which our

common notions are constructed; it demanded, in fact, the outlines of a science of LOGIC.

Nor was this all. A study of the *materials* out of which our conceptions are formed was equally necessary to satisfy the Socratic demand; for of what use would be clear definitions in the investigation of truth, unless those definitions were *correct* as well as clear to start with? In other words, *science* was needed in order to make human ideas correspond with the reality of things.

Socrates, we thus see, by the earnestness of his character, by his entire freedom from formalism, and by his vigorous common sense, approached to the very confines of the highest philosophic truth, and foresaw, with an almost prophetic eye, the course which the human intellect was destined to follow. He pronounced, in fact, the necessity of a complete logic, in order to keep the language of philosophy definite and clear; and of inductive research, in order to make our ideas correspond with the reality of things.

The next two great representatives of the Greek intellect—I mean Plato and Aristotle—started alike from the Socratic point of view. Plato, though abundantly conscious of the demands of logical science as a preventive against false reasoning, yet aimed chiefly at defining and fixing all the fundamental ideas. So long as these remained floating in uncertainty, there was no hope of putting down the endless logomachies of the Sophists. But the slow and certain method of rising inductively by gradual steps to the highest generalizations, did not suit the speculative character of the age, still less the soaring mind of Plato himself. He took refuge accordingly from the lower arena of logical contention in the higher sphere of *intuition*. Here he hoped to get the fundamental ideas of science positively and unalterably fixed; nay, to rise to the contemplation of the very archetypes of those ideas as they exist in the divine and creative mind, and see them standing like solid rocks in the seething ocean of human speculation. True knowledge he conceived to lie in the power of grasping these ideas with the eye of pure reason, and then of arguing *deductively* from them down to all the manifold details of human truth.

Aristotle took up first and foremost the *logical* side of

the Socratic philosophy. With a mind far too practical and realistic in its tendencies to follow Plato into the heights of his ideal system, he saw that a more complete method than had hitherto been devised was absolutely necessary to test the correct deductive sequence of ideas, and that without such a method philosophy must remain fruitless and insecure. Neither Socrates' definitions nor Plato's ideas could in his view furnish such a method, and it was to supply this want that he plunged into the region of formal logic, and evolved the system which more or less guided the world's teaching for above two thousand years.

The thoroughness with which Aristotle went into the details of formal logic, succeeded in completely destroying the prestige of the *geometric* method of reasoning. He found out by the acuteness of his analysis the fundamental difference between the treatment of numerical or geometric quantities, on the one hand, and that of our ordinary *qualitative* ideas on the other. He saw that whilst all quantitative reasoning consists fundamentally in the adding or subtracting of identicals, the reasoning of common life depends on the perception of *similarities*, this perception being the basis of the whole process of generalization into genus and species, and ultimately of all syllogistic reasoning. To him, accordingly, we owe the entire doctrine of terms, of logical extension and comprehension, of opposition and contradiction, and finally the whole syllogistic method of deduction. As an analysis of the reasoning process founded on the structure and use of language, the Aristotelian logic remains to the present day an unrivalled organon; but whether he himself regarded it finally as an instrument of discovery appears to be at least doubtful. Certain it is, that Aristotle's later labours were engaged chiefly with the diligent investigation of physical phenomena. He had evidently a clear perception of the fact, that no amount of logical acuteness could possibly supply the place of actual observation, although the truth was not yet distinctly pronounced—that all reality lies in the concrete and individual; that this must be investigated by a patient colligation and interpretation of facts; that from them we must rise gradually to more generalized conceptions; and that it is only after

this has been done that the deductive method becomes of any real service in the investigation of truth.

For this inductive method the age was not yet mature. Accordingly it was the purely logical side of Aristotle's philosophy which laid hold most firmly of the minds of his successors, and which gave the prevailing tone to their researches. The sects which arose out of Aristotle's philosophic labours altogether neglected the inductive research after truth, and withdrew from the study of nature chiefly into a subjective and ethical train of speculation. Neither the Epicureans, nor the Stoics, nor the Sceptics, showed any scientific spirit at all comparable to that which existed in the Socratic school. Their point of departure was the individual; their great aim was to find the *summum bonum* or highest good; and the method they followed was purely logical and speculative in its character. And though a vigorous *renaissance* of philosophic energy appeared still later in Alexandria, yet the whole cycle of philosophical speculation was confined to the influence and example of the two mighty masters of Greece, and never approached by any means so near to a purely productive and scientific system of research as they had done in that earlier age of Grecian speculation. Looking, therefore, at the ancient philosophy as a whole, we may sum up its real gain in a few distinctive points.

1. It succeeded in breaking through the ordinary unreflective circle of human ideas, and in bringing the mind of man face to face with the problem of human knowledge.

2. It orginated the deductive method as applied to numbers and geometry, and attempted to apply the same method to the sequence of ideas and the discovery of truth generally.

3. It separated the mere outward perception of facts from the inner consciousness of fixed and generalized ideas, rising in the case of Plato to the height of a lofty idealism.

4. It brought, through Aristotle's analysis, the logic of human thought into an almost perfect theoretic form, and sought to apply the organon thus evolved to the building up of various systems of philosophic truth.

5. Beyond this, it originated isolated efforts in the departments of mathematics, mechanics, physics, and natural history, and caught a distant glimpse of the scope and character of inductive investigation.

With regard to the general character of the ancient philosophy as compared with the modern, it was mainly objective in its tendencies. It sought to comprehend nature, and investigated the laws of thought mainly as an instrument for this end. Into the mysteries of the human soul, its relation to the world and the Creator, it hardly entered. These form the great problems which the philosophy of more modern times has been ever attempting to resolve. The ancient world idealized the external, and give rise to *art* in its highest perfection; the deeper questions of human nature and destiny formed a scarcely perceptible element in its intellectual and moral activity.

But now a new fact appeared, which was destined to exert a vast influence upon the progress of human thoughts—I mean the rise and spread of *Christianity*. The mythology of the ancient creeds interfered very little with the pursuit of truth philosophically considered. Whatever might have been the case with the masses of the people, the thinkers of every age set little store by the popular theology, and never seemed to take it into account as an element at all calculated to influence the progress of the intellect.

Not so, however, with Christianity, when once it became largely spread amongst the people. Its doctrines, shaped into new forms by the influence of Greek metaphysics and logic, aimed at setting up a more complete theory of human nature than had even been dreamed of by the priests of polytheism; while its adoption of the Hebrew cosmogony gave it a still greater completeness, as including a full and authoritative statement of the origin of the world, and the creation and destiny of man. But the doctrines of Christianity did more than give the elements of a complete human philosophy; they aimed at an entire interpretation of the human and divine in all the relations of life, and in the entire government of the world, placing all outward things under the guidance of an overruling Providence, and all the struggles of the human soul after

reconciliation and peace under the fundamental ideas of the apostolic teaching. In this way they came gradually to fill up the whole horizon of human thought, hope, and feeling. In proportion, therefore, as the ancient philosophy became obscured by the mists of the advancing barbarism, the mind of Europe gradually gravitated to the dogmatic teaching of Christianity, as being the centre and *containing* the substance of all human truth.

Under these conditions, it is not to be wondered at, that philosophy properly so called came during the Middle Ages to play a wholly subordinate part. In place of looking out upon the universe and man as the material from which the human intellect was to seek its inspiration, and from which to reason up to the highest truth, the entire problem of philosophy was altered. The material of truth was now regarded as lying wholly within the authoritative teaching of the church, and had to be received by the eye of faith only upon that authority.

But as the existence of the human reason could not be denied, and as some sort of function for it was still necessary, the chief aim and purport of all philosophy was to enable man to *comprehend intellectually* what faith had already revealed to him *supernaturally*; it was *fides quærens intellectum.* The limit, the scope, the possible material of human knowledge was already defined; it only remained for philosophy to bring it into an intellectual form and build it up into a consecutive system of ideas. Philosophy became, accordingly, an instrument not for the *discovery*, but simply for the *formularization* of truth.

This, which I have just described, is the entire standpoint of the *Scholastic* system. It made an abundant use of Aristotle, but it employed the logical forms of that great master simply to define and systematize its own ideas. And this lasted, with very subordinate exceptions, till the time of the Reformation. With the Reformation the principle of authority itself was disowned; and that done, the emancipation of philosophy from the guidance of dogmatic faith soon followed as a necessary consequence.

The predominant tendency of human thought never makes a sudden change. The untenableness of long-

acknowledged principles and dogmas only dawns gradually upon the human mind. It is first seen, and, as it were, prophesied by the foremost spirits of the age, and then descends gradually lower down the scale until it becomes a popular conviction. A feeling of the unsatisfactory nature of the reigning philosophy had been silently gaining ground for some time previous to the Reformation. Various attempts had been made to undermine the authority of Aristotle and his Scholastic followers. Some essayed to revive the Platonic ideas; others (as Peter Ramus and his friends), to make innovations in the department of logic itself; while some of the more original spirits of the age took refuge in a dim religious mysticism. Our own countryman, Lord Bacon, was the first to disown the entire principle of the Middle Age philosophy, and advocate a *new organum* altogether.

We have it on the authority of Dr. Rawley, Bacon's secretary and biographer, that when a student at Cambridge, he became deeply impressed with the utter fruitlessness of the philosophy usually taught by the professors in that seat of learning. The thought forcibly struck him, 'If so many minds, exerting so much intellectual activity, arrive at so few results, must not the whole method of study be wrong? and if the ordinary method be wrong, might not a better one be substituted for it?' This idea, which, no doubt, appeared simple enough at the time (as all great ideas do), dominated his whole subsequent life. It was the key-stone to all his scientific endeavours, the first dawn of the inductive philosophy, the harbinger of all those vast discoveries which the last two centuries have been gradually unfolding.

Bacon's great merit lay, not so much in the application of *induction* to the discovery of new truths (for this had already been applied by Aristotle himself and by many of his followers subsequently), as in the clear and decisive statements he made in reference to the scope and purport of philosophical research. A philosopher of the old school would have reasoned in this way, 'What have we, the world's *thinkers*, to do with material conveniences? If you want such things, apply to the proper sources. Our business is a different one. We have to do with human thought, with

the abstract, the real, the universal. We have to teach what *is*, not what *appears*, to enable our followers to rise to the sacred contemplation of the highest existence and the highest good, and thus to separate themselves from the common herd of mankind as lovers of wisdom and servants of the absolute truth.'

Bacon, on the contrary, began his philosophizing by revising the whole conception hitherto entertained of the end and purport of philosophy. Looking athwart humanity at large, he was deeply impressed with the extent—nay, with the almost entire *universality*—of human misery. Poverty, pain, tyranny, unalleviated wants and sufferings, abounded on all hands. To relieve these, philosophy, as hitherto practised, had been powerless. While seeking the abstract and universal, it had left the real concrete wants of humanity altogether out of count. And what was the result of this on the state and progress of human society? Ignorance of the universe, involved ignorance and error as to the relation of man to its Creator. The world in which we live was regarded as comprising virtually the whole of the material creation; the sun, the moon, and the stars as so many attendants upon it, and so many ministers to human necessities. The mind of the Almighty was therefore regarded as being chiefly concentrated *here* on this earth; here His plans were unfolded; here alone His schemes of moral government were to be wrought out. And yet, despite the supposed interference of Deity in the whole flow of human affairs, the fact was palpable enough on every hand that the great mass of mankind lay buried in ignorance, vice, and consequent misery. How then was this state of things to be reconciled with the current theory of the universe, and with the idea of a divine plan in all the arrangements of human life? The explanation was this: Man was destined, by the very state of things in which he was placed, to learn the great lesson of self-abnegation; to deny the flesh; to rise above the sense of sorrow or suffering; and to live in the higher regions of spiritual contemplation.

But how far, it may be asked, did the reality of things answer to the idea which the Middle Ages thus propounded? Theory said, 'Subdue and crucify nature;' but nature proved

far too strong to be thus summarily put down. Theory said, 'Implicitly believe the church, and absolutely submit to the king;' but when the church became hard to believe in, and the king hard to obey, men rose up in fierce combat both against the one and the other. Theory said, 'Let everything on earth be subordinate to religious observances;' but religion itself, when set counter to nature, degenerated into mere superstition, and fierce human passions rolled like a tide over the earth till it became full of violence and crime. Such were the *actual phenomena* presented by the Middle Ages. Century after century passed away, and no change appeared—no great discoveries brightened the passing ages; no human improvements came to light. Under the spell of the one master-thought, sanctioned by the reigning philosophy, and proclaimed by the current religion of the day,—viz., that all evil consisted in administering to the flesh, and all good in sacrifice and struggle,—human life itself was stripped of all æsthetic culture, and human progress proved an impossibility.

Now Bacon stood on the skirts of the Middle Ages; he saw the tremendous evils which afflicted humanity, and he well understood that all the cherished lore, all the verbal disputation, all the logical striving of that time, had no effect in elevating the temporal condition of humanity. He looked around, and saw a beneficent and beautiful nature smiling upon all, pouring out unbidden her ample stores, awaiting only the touch of science to become the friend of man and the administrator of human happiness; he saw clearly all this, and declared his entire intellectual revolt against the old philosophy and the old spirit which nurtured it. He reversed, in fact, the whole problem of philosophy itself. In place of looking upon nature as an enemy, he regarded her as the friend of humanity, and declared that it was the purport of intellectual research to alleviate the ills of life, to multiply our conveniences and comforts, and to furnish us with aids for enhancing human refinement and culture.

Such was the spirit of the Baconian writings, and such the new life they strove to inaugurate. In place of dealing with abstract ideas, and seeking to build up a system of philosophy by mentally elaborating them, he went at once

to the fountain-head of nature, propounded the method of dealing with phenomena, showed the gradual procedure of inductive research from individual up to general truths, and pointed out the inestimable value of knowledge thus educed and thus established.

Whilst Bacon was turning the current of human thought into a practical channel, another revolt against the authority of the Middle Ages took place in France under the intellectual leadership of Descartes.

Descartes appears to have become equally disgusted with the reigning philosophy as Bacon himself. He pronounced with equal decisiveness upon the utter fruitlessness of the Aristotelian logic as a method of discovery, and took refuge against the pretensions of authority in the principle of *universal doubt*. So far he would have gone hand in hand with the Baconian school; but the moment the work of reconstruction commences, there they part company and follow diametrically opposite roads.

Bacon, trusting the natural power and validity of the senses, looked *without*, and sought to interrogate and interpret nature. Descartes, rejecting the evidence of the senses as untrustworthy and often fallacious, looked within, and sought for those criteria of truth which the human reason could alone present. But if reason is to be the criterion of all certitude wholly apart from sense and experience, it can only be so in virtue of possessing original *à priori* knowledge, the germs of which lie ready formed in the soul from its very birth. Thus, with the very best desires and intentions, Descartes falls back once more into the old circle of innate ideas, and strives to educe a whole system of undeniable truth by elaborating them anew. Vain hope and fruitless attempt! He forgot, if he ever read, the great principle so beautifully expressed by Bacon in his *Advancement of Learning*, that 'the human mind, if it sets to work by studying the nature of things and the work of God, operates according to nature, and is guided by it; but if it turn in upon itself, like a spider weaving its web, then it becomes vague and produces webs of philosophy, admirable it may be for the fineness of their weft, but for any real use frivolous and inane.'

The warning thus held up was singularly verified in the case of Descartes. What did Cartesianism produce? Endless disputes, plausible theories, philosophical dogmas which in turn amused, occupied, and irritated the next generation, but nothing fruitful, beneficial, or lasting. Even if we lay aside his metaphysical reasonings, his *à priori* arguments, his physical hypotheses, and all those positive portions of philosophy which now exist only as curiosities of history, and look to the best thing his system contains,—I mean the method of regulating the understanding in the search for truth,—even here, when we sympathize with his candour, caution, and perfect freedom from prejudice, we still fail to discover anything really profound or at all capable of sustaining the merit of inaugurating a *scientific revolution.*

It is true, we must admit it to have been a great step in advance of the current philosophy of the times, to reject all authority, to look within, to read his own consciousness, and to appeal to what reason presented as *self-evident* truth. But the necessity of some such renovation had already become manifest to all the foremost thinkers of the time, and, indeed, had become tacitly acknowledged by the whole spirit of the age. The great thing to be done, and the great thing which Bacon really *had* done, was to lead the awakening spirit of inquiry into a fruitful channel, and point out the valid principles of philosophic research. On the other hand, all that Descartes presented which could serve as a method of research, was contained in four maxims:—

1st. That we must take nothing for truth which is not *evidently* known to be so (a very wholesome precept, but one which does not do much practically to further the real progress of investigation).

2d. That we should divide the difficulties we have to contend with into as many parts as possible, in order the better to resolve them (a very indefinite precept at the best, as it is never defined what the parts are, whether outward facts or inward ideas).

3d. That we should begin the investigation of every subject by considering its simplest elements, and proceed thence to the more complex ones. (This is certainly a little more to the point, but still falls far behind the

Baconian idea of induction long before inculcated and practised.)

The fourth precept directs us to make a complete enumeration of parts in every investigation, so that nothing is passed by unperceived (a most excellent piece of advice, but one which aids us very little in our attempts to follow it). In fact, the whole of the Cartesian methodology is confined to vague generalities, good as far as they go, but, regarded in the light of a philosophical organon, fruitless and impotent. Its almost solitary result has been the spirit of independence which it introduced into France by its appeal to consciousness as the legitimate antagonist to the claims of authority.

The more immediate results which grew out of the labours of Descartes, were the new-fashioned Platonism of Malebranche, and the rigid pantheism of Spinoza, with their various actions and reactions. The doctrine of Occasional Causes, the 'seeing all things in God,' the absolute substance of Spinozism, and perhaps, we may add, the pre-established harmony of Leibnitz, were the main sequences of Cartesianism for a whole century after its birth. And, no doubt, they have played a great part in the contests of metaphysicians, have been discussed and re-discussed a thousand times by men of all philosophical opinions, and lived on in the world of philosophy by virtue of their logical subtleness even down to the present day. But *out of* the world of philosophy, it is hard to say what benefit, either physical, moral, or intellectual, these Cartesian results have ever conferred on mankind. They never availed to produce a single popular conviction, or to explain satisfactorily a single intellectual difficulty, or to furnish (as the Aristotelian logic has ever done) any kind of valid instrument for mental education. The contrast between the Baconian and Cartesian method of philosophy has been well stated by an able French writer as follows:—

'To *conceive*, and then to reason on the basis of these conceptions; to define, to demonstrate, to conclude—this is the method of Descartes; and on this method he founds a school. The contrast of Bacon and Descartes is the contrast of experience and pure reason, of the mathematical

and physical sciences. When the one recommends us to observe, to accumulate experiences, and to follow up the comparison of phenomena, the other conjures us to close our eyes and shut our ears in order to withdraw ourselves from the illusions and tumult of the senses, and to listen only to the understanding—the faculty which can alone apprehend, judge, and reason. Bacon and Descartes alike combated and ruined the Scholastic logic; but the one did it because it suppressed all that power of intuition on which alone deduction can be based, the other because it accepted ready made those general notions the elements of which ought to be drawn from experience.'[1]

Spinoza's merit was that of carrying out the Cartesian principles to their ultimate results. The data for the erection of such a monument of philosophical speculation as his writings present were already at hand. The innate ideas from which all certain knowledge springs, had been educed within the Cartesian school by long and patient thought, and the consecutive geometric method by which alone (it was believed) human thought could advance to new discoveries was clearly laid down and defined; but the earlier heroes of the school were too habitually mingled up with the world of men and things to commit themselves entirely to the wings of abstraction, and follow the lofty path to which these principles seemed to point.

Benedict Spinoza alone was capable of this. A scholar, a recluse, a poor artisan, a Jew, he had little sympathy with the ideas, opinions, faiths, and dogmas of the world around him. *His world* was simply the world of thought. In the atmosphere of pure speculation he lived, moved, and had his being. Wherever speculation (with him synonymous with truth) pointed, he was ready to follow; and however bold its conclusions, he was ready to draw them. He had nothing to renounce in treading this lofty path, and as far as mental satisfaction went he had everything to gain. Accepting, therefore, the Cartesian definitions of consciousness, of matter, of extension, of the soul, and of God, he built up a system of propositions, demonstrating the divine

[1] See Introduction to the French edition of Leibnitz, by M. Jacques.

essence to be the basis of all reality, proving the world to be but the manifestation of the Deïty, and all human action to be a network of fixed necessity, proceeding by regular sequence from the essential properties of nature.

As a system of thought, nothing perhaps could be grander in its whole conception. As a *philosophy*, nothing could be more empty of real explanation, or less satisfying to the inquisitive spirit of man. For to whatever extent geometric quantities are poorer than the living realities of nature, to that extent is the system of Spinoza poorer, less replete with truth, less instinct with *life*, than a valid philosophy of nature and humanity ought to be.

In the hands of Leibnitz the mechanical pantheism of Spinoza broke down. He demonstrated with convincing force the truth that material existences do not consist merely in extension and its properties, but that upon every created thing there is impressed a self-developing *power* and an intelligent *purpose*. The monadologie of Leibnitz (to which we shall have occasion again to revert) was in fact the precise logical contradiction of the pantheism of Spinoza, and contained the germ of well-nigh all the doctrines which have been evolved in the more modern speculations of Germany.

Locke and Leibnitz were contemporaries as well as literary opponents; and in them we see the point of divergence which has led to the two great opposing schools of modern philosophy—the empirical and the idealistic. The teaching of Locke, rejecting as it did the whole doctrine of innate ideas, and deducing the entire material of human knowledge from the intimation of the senses, after leaving its impression upon the whole surface of English thought, passed over the channel and expanded into the extreme doctrines of the French materialistic school. In the same way the teaching of Leibnitz, after passing through the alembic of Kant's powerful intellect, reappeared in the equally extreme doctrines of the German idealism.

The eighteenth century was *par excellence* the age of extremes. The materialistic extreme had its centre in France, the idealistic extreme in Germany; and these two schools governed the whole speculation of Europe during

the early part of the present century. But extremes are never durable. The outburst of literary life in France which distinguished the reign of Louis Philippe, at the same time inaugurated a school of philosophy antagonistic to the prevailing sensationalism. Victor Cousin and his coadjutors restored the balance of philosophic thought, and by a wise eclecticism brought the idealism of Germany and the psychology of Scotland to bear upon the French intellect, and stay the current of shallow materialism which had for a time absorbed it.

In the same way, the German revolutions of 1848 brought the current Hegelian idealism to a stand-still, and by diverting the German intellect into the various paths of practical and political life, restored the influence of common sense within the current of philosophical thought. At the present moment there is no great reigning school of philosophy either in England, France, or Germany. In every country the tendency shows itself with equal clearness, to revert to the inductive method of research; and to accept alike any conclusions which may arise, whether they lean more to the side of idealism or sensationalism. The vast array of facts thus accumulated will no doubt lead to some broad generalizations, which may at length serve as outlines and foundations for the philosophy of the future.

CHAPTER II.

Leibnitz and his School.

THE progress of modern philosophy down to the age of Spinoza was confined almost entirely to the schools of England and France. In the Universities of Germany, Aristotle and the Middle Age scholasticism still reigned supreme; and if innovations were ever ventured upon, they all took the direction of the Cartesian principles. The time, however, had now arrived when Germany was to assert its intellectual independence, and commence that career of speculative activity which has since filled so large a page in the history of modern philosophy. The inauguration of this movement was due to the learning and genius of Leibnitz.

Gottfried Wilhelm Leibnitz was born in the year 1646, at Leipsic, where his father was Professor of Moral Philosophy. Like his great contemporary Pascal, Leibnitz was marked with the impress of extraordinary genius from his earliest childhood. He passed through all the ordinary stages of education in the schools of his native town, with a facility which left the greater part of his time free for study amongst the treasures of his paternal library. By his twentieth year, he had mastered all that the professors of his day could teach him in classical literature, mathematics, physics, philosophy, and law. Being refused the credit of competing for his degree in consequence of his immature age, he left Leipsic in disgust, and commenced a life of independent intellectual effort and labour unparalleled, probably, in the whole range of modern biography. He betook himself first to Altdorf, near Nurenberg, where he received his degree with the highest honours. The next year he became secre-

tary to the Baron von Boineberg, a statesman of the highest order, who saw Leibnitz's great ability, and introduced him at once into all the political movements of the day. We find him sojourning for a time with the baron in Frankfort and Maintz, occupied deeply with the most abstruse and difficult questions pertaining to religion, law, science, and politics. From thence he goes to Paris, and becomes intimately mixed up with all the intellectual activities of that great centre of European culture. Letters which he wrote to eminent persons in Germany, and which have been fortunately preserved, give an extraordinary idea of his intense mental activity at this period in every department of human knowledge. He is at work on a calculating machine, which should give an automatic perfection to all the geometric processes employed in practical life. He announces a ship, which he has invented to sail *under* the water, and a method of reckoning longitude and latitude without any sight of sun, moon, or stars. He proposes improvements in hydrostatics, optics, mechanics, and law, and during all this time he is inventing and perfecting the differential calculus.

Next we find him in London, in close intercourse with Pell, Boyle, Collins, and the Royal Society. Unfortunately his visit here is embittered by his contest with Newton respecting the priority of their respective mathematical discoveries—a contest which lasted for forty years, and is not even set at rest at the present day.

Leaving London, we now find him returning by Holland to Germany, and visiting Spinoza on his way. Strange encounter of the two greatest metaphysical thinkers of that, or perhaps of any other age!

Next we find him entering the service of the Elector of Hanover, and starting for Italy on a tour of discovery respecting the archives of that family. He carries the impress of his genius with him here, and, on condition of his becoming a Catholic, is offered the superintendence of the Vatican library. But he is too deeply engaged in his own pursuits to be bound down by any local ties, and after ten years returns to Germany with rich treasures of historic research.

He now becomes the founder of the Academy of Sciences

in Berlin, and keeps the scientific spirit of the country alive by frequent communications in the departments of literature, science, and philosophy. His advice is sought by the highest potentates in Europe. He is ennobled by Charles XII. of Sweden and Peter the Great of Russia. So intense is the spirit of inquiry which his personality excites, that the very age is infected by a metaphysical mania. The Electress Sophia of Hanover and her daughter, Sophia Charlotte, the wife of the Elector of Brandenburg, and the first queen of Prussia, become his closest friends and patrons. The latter, on her deathbed, is reported by her grandson, Frederick the Great, to have said to her weeping attendants, 'Do not sorrow for me, for I am now going to satiate my curiosity with things which even Leibnitz could not explain, respecting space, the Infinite, Being, and Nonentity!' Leibnitz died in Hanover, A.D. 1716.

The genius of Leibnitz is characterized mainly by its *universality*. He is not a *mere* philosopher; he is a mathematician, a linguist, a theologian, a lawyer, and a historian. Fortified with these varied acquirements, he sees the bearing of all the intellectual theories of his age, and judges them according to their relative merits. He notes what is true and what defective in them all; and his great passion is to merge them into some higher principle, where their contradictions can be fully reconciled. Thus, though originally a Cartesian, he defends what is good in the old Scholastic system, and which Descartes had already repudiated. Though a Protestant, he carries on a correspondence for years with Bossuet, to bring about a reconciliation of the two great rival churches. Though himself a Lutheran, he seeks to unite the Lutheran and Calvinistic communities in one common bond. Though an idealist, he seeks to reconcile himself with Locke. His great motto was, '*Unity* in the highest form of truth.' This was the man to whom Germany owed her first great movement in the race of philosophical speculation.

Historically speaking, Leibnitz comes clearly in the wake of the Cartesian school. His education led him naturally in this direction, and his first attempts at philosophy (as shown in the two early treatises on Motion) are conceived

wholly in the Cartesian spirit. We find in him as yet no trace of the Baconian principles; no systematic observation of facts, as the basis of discovery; no advance from particulars to generals; no induction leading up to universal truth. Like Descartes and his followers, Leibnitz began by laying down a theory deduced wholly from reason and reflection, and then sought to elicit from this an exposition of all the phenomena he proposed to investigate. If we turn to those writings which contain his ideas on *method*, we find him virtually adopting the Cartesian principles from the beginning, though stated perhaps in a different form. Thus, to clear the way for a due comprehension of the process of philosophical research, he commences by pointing out the characteristics of *clear* and *confused* ideas. Those which are derived immediately from the senses, he maintains, are always *confused* and inadequate; while those which flow from the reason are perfectly definite and exhaustive. Ideas derived from sense admit only of a *nominal* definition, which can never enable us to grasp by the reason the full nature of the object defined. Ideas, on the other hand, derived from mental insight, like those of number and geometry, admit of a *real* definition, and carry with them the evidence of perfect certainty; hence it is from these that all demonstrative scientific truths must flow. The two great criteria of truth and falsehood are the principle of identity and contradiction on the one hand, and the principle of sufficient reason on the other; and nothing which cannot trace its certitude up to one or other of these principles can be regarded as scientifically determined. Experience accordingly performs quite a secondary part in the economy of human knowledge, for its intimations never rise to the height of scientific certitude. This is the general tone and burden of Leibnitz's methodology, and is sufficiently demonstrative of the fact that he belonged from the first to the purely *à priori* school of thought. But Leibnitz, though a follower of the Cartesian *à priori* principles, was no *blind* advocate of a fixed system. The history of the Cartesian movement, for a hundred years from its source, lay spread out before him, and side by side, the results of the Baconian philosophy down to the period of Newton.

It was impossible that a mind so versatile should not be aware of the comparative failure of the former; that he should not feel secretly conscious of the sorry insignificance of the speculations of Malebranche, and the pantheism of Spinoza, when compared with the assured march of the inductive sciences. That the spectacle of the two rival schools had really exerted an influence upon his mind, we are not left long in doubt. The mechanical physics of Descartes had proved a failure; the 'vortices' had turned out as empty in speculation as they were in fact; the 'elaboration' of the idea of substance had gone on and on, until the whole universe was congealed into a rigid system of pantheistic fatalism. The universal and absolute substance of Spinoza had absorbed at last, physics, ethics, and theology, and evolved one unbending rationalistic doctrine, which confounded human freedom with natural law, and God with the universe. Compared with the law of gravitation and the splendid researches of physical philosophy, what a miserable climax must *this* have seemed to the broad and common-sense intellect of Leibnitz!

He soon acknowledged, indeed, that it was so, and vigorously applied his mind to discover the false link in the Cartesian reasoning which had superinduced so empty a result. This false link, he at length assured himself, lay in that *mechanical* idea of substance, which the Cartesian philosophy had all along assumed and maintained.

Descartes, following the rationalistic method, had inquired, not of the *senses*, but of the *reason*, to know in what *substance* really consists; and reason had given him the unequivocal answer, that substance consists essentially in *extension*. All other attributes which matter may possess, according to Descartes, are *contingent* and *accidental;* but extension is essential to the very idea of it. Thus, all matter came to be regarded in the Cartesian school as philosophically *synonymous* with extension, and all reasoning upon it equivalent to reasoning upon the different forms and modes of extension. Physics accordingly became, in this way, simply a problem of geometry; and the facts of nature were bound to flow from the fundamental ideas and axioms which lie at the root of science, exactly in the same way

as the whole superstructure of geometry is deducible from the definitions and axioms which form the starting-point of all its reasoning.

Captivating as this whole doctrine had been even to Leibnitz himself, he became at length sufficiently aware of the absurd results which flowed from it, in the case of Spinoza and others, as to acknowledge the necessity of its entire revision. In a highly acute strain of metaphysical reasoning, he shows that the geometric idea of substance could never account for figure, or motion, or purpose, or any of those actual phenomena of physical life which, according to Descartes, it ought to explain and illuminate. Taking up all the hypotheses of the relation of the Creator to the universe, he concludes that the Almighty must have impressed upon everything a fixed and immanent *law*, by virtue of which it tends perpetually to the fulfilment of its destiny. But this law, when seen in action, implies an *energy* or *force* directed to some end, so that it thus lifts the whole of the material world at once out of the geometric sphere into that of *power*—of power, too, ever striving to work out intelligently some final cause or purpose. This whole conception of substance, it is evident, cuts at the root, as Leibnitz intended, of Spinozism. The universe is no longer substance *merely*, but substance and *force* combined. The objects of nature no longer exist in God as modes of the Infinite Being, but apart, and wholly separated from the divine essence, each having its own law, and working out by its inherent energy its own final destination. To the science of geometry, accordingly, Leibnitz saw that there must be added a science of dynamics, by which the laws of force and motion should be reduced to a scientific expression. To this view of the universe, no doubt, were greatly due those mathematical researches which produced the first rough sketch of *the calculus*.

To introduce the principle of power and purpose into nature, was a great innovation upon the Cartesian physics, but one which could not have cost, to a mind like that of Leibnitz, any great amount of effort. To carry out this principle, however, so as to frame a whole system of the universe in consonance with it, was a much greater effort

of constructive ingenuity. If power and substance are indissoluble realities, if wherever there is a single atom of matter there must also be its correlative *force* impelling it to accomplish its purpose, then, argued Leibnitz, must the universe consist of an infinite number of powers or forces, all emanating from the Infinite Being, and all sent forth on their destination in the world. All the parts of the universe are accordingly *homologous*. Wherever there is *existence*, there is power and purpose, or, in other words, *mind* and intelligence in some particular sense of that word. The universe, therefore, must be regarded as consisting of an infinite number of independent existences,—in other words, of individualities,—each having its own law, each acting ever in exact conformity with this law, and all together forming, by the independent activity of each, a perfectly harmonious whole. The term employed by Leibnitz to designate these independent existences was the word *monad*. The truth accordingly may be thus stated:—The Almighty, the great eternal self-existent Being, has seen fit to create an infinite number of monads, in an ascending hierarchy, from the meanest atom of matter up to the highest intellectual existence. All work independently by their own force, and in accordance with the inherent law impressed from the first upon them; and all form a portion of the great plan, embraced alone by the infinite mind and wisdom of the Creator.

The most distinctive and perhaps important portions of the Leibnitzian philosophy, are those in which he attempts to bring all the phenomena of nature and man into consistency with this doctrine of 'monadologie.' Let us touch briefly upon the most important of these results.

1. By giving to nature an independent and self-regulating force of its own, he broke down virtually the long-imagined separation between matter and mind, and maintained the existence of a subordinate, unconscious, latent power of intelligence in the lower regions of nature, which becomes semi-conscious in the animal creation, and self-conscious at length in man. This doctrine of latent thought, it is just to say, has been revived by later psychologists, constitutes an important element in the modern German

systems, and has been applied in our own country to the exposition of the lower and instinctive regions of our mental operations.

2. The perfect independence of each separate existence in nature became naturally an embarrassing problem, when the mutual connection of mind and body (which Leibnitz regarded as wholly separate monads) came to demand an explanation. This problem, however, he solved satisfactorily *to himself* by the doctrine of a *pre-established harmony.* This doctrine assumed in the Leibnitzian philosophy a universal aspect; and as such seemed to exhibit in a magnificent point of view the infinite power and resources of the Deity. Its application to the twofold nature of man followed as a natural consequence. The human mind and the human organism, like all other monads, must develope and operate, *each by its own law of action.* The union between them, therefore, must be apparent rather than real. Each would, in fact, pass through exactly the same stages of being, and exhibit the same phenomena if that union did not exist, the whole parallelism of activity being due to a pre-established order of things formed in the mind of the Creator.

No one probably would ever have propounded a theory so little in consistency with obvious facts, had it not been necessitated by allegiance to a wider theory. We see here, in fact, an example of the great *weakness* of the deductive method. Broad theories are adopted, and the world must be interpreted in accordance with them. Doctrines and explanations are readily accepted which are wholly at variance with common sense, and which no reasonable man would ever have entertained for a moment but for the sake of saving the theory which rendered such an explanation inevitable. When the verifying power of induction is absent, such wanderings of the reason are sure to arise, and lead the mind away from the true problems of nature into the many devious paths of mere hypothesis.

3. To cohere with the theory of pre-established harmony, the doctrine of perception had to be entirely remodelled. The Cartesian philosophy, by raising up a barrier between the mutual action and reaction of mind and matter, had

affirmed that the objects of nature around us are not *causes*, but only the *occasions* of our perceptions; that the cause lies in the divine operations, the occasion of that operation in the circumjacent reality. This doctrine, it is well known, was moulded by Malebranche into the vision of all things in God. Leibnitz cut at the root of all this idealism, by affirming the real independent existence both of mind and nature as separate monads, and their perfect though independent co-operation in the divine scheme of the universe. Every perception thus indicates the real parallel existence of its object, although the two can exert no direct influence the one upon the other. They are correlative facts, perfectly corresponding with each other, according to the original harmony of the divine plan.

4. With this theory to work with, it need hardly be said that Leibnitz found it a hard task to conserve the interests of morality and admit the liberty of human actions. This was one of the chief points mooted in the correspondence which took place between him and Dr. Samuel Clarke, in which Clarke, with great acuteness, follows Leibnitz step by step in his attempt to conserve a semblance of liberty in human action (the liberty of indifference), and to obviate the more extreme consequences of necessarianism. Into this controversy it is needless for us now to enter. We may simply indicate that Leibnitz held what has since been termed the doctrine of philosophical necessity, and used the same arguments that have ever been employed to render that doctrine consistent with moral responsibility. These arguments Clarke refuted; and it is a matter of regret that Leibnitz's death occurred in the midst of the correspondence, and before he had penned his last explanation.

Leibnitz was not, strictly speaking, a psychologist, and had always been accustomed to regard all questions concerning the human mind on their metaphysical rather than their psychological side. Notwithstanding this, on his attention being drawn to the theories propounded in Locke's *Essay on the Human Understanding*, he undertook to reply to them seriatim, and produced in French the *Nouveaux Essais sur l'Entendement Humain.* Here, as usual, he attempted to

find a middle course between the doctrine of innate ideas as held by the Cartesians, and the total rejection of them by the great English metaphysician. So far, indeed, he was constrained to admit Locke's arguments, that no definite and ready-formed innate ideas or innate principles can be vindicated as forming any of the original furniture of the human mind. But then, again, the doctrine of *power* came to his aid, and led him to see that though such ideas could not exist *really*, they still might do so potentially; that if we do not possess innate *ideas*, we still possess original *powers* or capacities, which in the course of their development necessarily issue in certain intellectual results. This was the burden of his reply to Locke; and the judgment of posterity has been, that he has really put his finger upon the weak point in Locke's philosophy, and at the same time shown in what direction we must look for its rectification and completion.

From the above brief explanations, the position occupied by Leibnitz in the realm of European philosophy can be readily determined. As far as *method* is concerned, he belongs wholly to the *à priori* school. Philosophy with him follows the order of *mathematic science*. To educe a body of scientific truth of whatever kind, it is necessary first to consult the consciousness, to evolve out of it certain axiomatic truths as the starting-point, and then to descend from them deductively to particulars. In this respect he was strictly speaking a Cartesian, and never wholly gave up his adherence to the method first proposed.

But to the Cartesian *doctrines* he objected. He had no faith in the system which interpreted nature through the mere elaboration of the ideas of space and motion, but introduced at the very outset a new category, that of *power*—of power individualizing itself through all the realms of creation, and each unit aiming at the accomplishment of its final purpose.

Once committed to this line of research, he did not shrink from the consequences, however startling, but educed in order the doctrines of monadology and pre-established harmony, and accepted all the minor conclusions, physical and moral, which they brought in their train. Overlooking

the extreme improbability of many of these conclusions, he rejoiced in the grand and almost overwhelming views which his philosophy gave of the infinite power and wisdom of God; slurred over the question of moral and physical evil as mere incidental parts of the whole system of things, and arising necessarily from the limitation of our nature; and sank back into a happy theory of optimism consonant alike with his general conception of the universe and the natural amiability of his disposition.

It must be obvious from the above sketch that the mind of Leibnitz was of a broad, all-embracing, and speculative type. He never contented himself with any half theories, but aimed at founding a system of philosophy which should carry with it a consistent and logically consecutive interpretation of the *entire universe*. The importance of his intellectual labours *to us* does not lie in their intrinsic value, so much as in their historical bearing upon what went before and what came after him in the world of thought. Thus viewed, Leibnitz appears as the *pivot* upon which the whole fabric of German philosophy turns. His school bridges over the gulph between the rigid dogmatic ontological theories of Descartes and Spinoza and critical researches instituted by Kant into the structure and limits of the human reason.

Down to the time of Leibnitz, the philosophical teaching of Germany had maintained the old Scholastic traditions, which were only gradually giving way to the new and more independent spirit evoked by the genius of Descartes. Public bodies always move more slowly than individuals in the way of reformation, and are the last to throw off old exploded dogmas. To this fact it may have been owing, that while most of the independent thinkers of the age sided with the Cartesian principles, yet they had as yet obtained but a precarious footing within the walls of the Universities. But for some years before the death of Leibnitz, his authority began to be sensibly felt throughout Germany; and had he presented his opinions in a more systematic form instead of scattering them through a number of isolated and informal treatises, they would probably have displaced the old philosophical methods

from the schools of learning, as they had already done from the minds of the more advanced thinkers of the age.

Before this could be accomplished, it was necessary that the Leibnitzian philosophy should be arranged and systematized, that the scattered threads of thought should be gathered together and made to cohere in some appreciable unity. This service was accomplished by the industry of his most celebrated disciple, John Christian Wolff.

Wolff was born at Breslau in the year 1697. Already, while attending the gymnasium of his native town, he was struck with the fact that some of the professors pronounced the study of philosophy to be useless, whilst others considered it indispensable. The period of which we are now speaking,—I mean the earlier part of the 17th century,—was one of great theological strife, particularly in Silesia. Wolff was early brought into contact with these religious controversies, and began, while a student, to inquire earnestly for some *criterion* by which theological truth could be determined with some approach to certitude,—some method by which valid deductions could be made from first principles. The professors, influenced probably by the writings of Descartes and Spinoza, could simply point him to *geometry* as being the only example of a sure method by which one truth could be deduced from another with *absolute certainty*. Following their advice, he entered the University of Jena, and applied himself to mathematics and philosophy. In 1702 he graduated at Leipsic, and there first made acquaintance with Leibnitz and his writings. Here, at length, he seems to have found the kind of satisfaction he had long sought; and from that time he enrolled himself as a disciple of the new school.

By the recommendation of Leibnitz, he was called to Halle as Professor of Mathematics in the year 1707. To his mathematical teaching he soon added lectures on physics and philosophy, and rapidly obtained the highest popularity as a public teacher. Halle was then the centre of Protestant orthodoxy. Franke, Lange, and others of the same school—excellent men for the most part in practice, but narrow-minded in principle—looked with concern upon the popularity of the young professor, and, fearing the influence

of his philosophical teaching upon the minds of the students, formed a party in the University against him, and demanded that he should forthwith give up the teaching of philosophy, and confine himself entirely to mathematics. Mutual recrimination ensued, and the matter was carried to Berlin, where a commission was appointed to examine into the state of the question. This committee appears to have given a decision in favour of Wolff; whereupon the orthodox party, not to be frustrated, made an appeal to Frederick I. Frederick, as ignorant of philosophy as he was bigoted in favour of his theological opinions, would probably have exercised some rough kind of justice in the affair, had the accusers not been wise enough to take the king on his weak side. They presented to him in frightful colours the doctrine of pre-established harmony, with its moral and social consequences, and showed that, for example, a deserter from the royal dragoons could not on these principles be held responsible for his flight, or righteously punished for it, his bodily movements being all *pre-ordained*. The king fell into the trap, interpreted the doctrine in its literal application, rose up in horror at the thought of such teaching being allowed in any of his own Universities, and sent a rescript ordering Wolff to leave Halle in four-and-twenty hours. Franke is reported to have offered public thanks on the following Sunday for his removal.

Driven from Prussia, Wolff found an asylum at Marburg, where he was at once appointed professor by the Duke of Hesse Cassel, and received the most flattering attentions from learned bodies in England, France, and Russia. Meantime the political and intellectual horizon changed. Frederick the Great came to the throne; the doctrines of Leibnitz spread rapidly throughout Germany; philosophic liberalism became rather a passport to royal favour than the reverse, and Wolff was recalled in triumph to the scene of his former disgrace.

Few men have written so voluminously and systematically on the whole range of the moral sciences as Wolff. In addition to his Latin works, he composed numerous digests on all the different branches of those sciences in the ver-

nacular German, and was perhaps *the first* who succeeded in bending the German tongue (hitherto but little used in philosophical teaching) to express all the various shades of metaphysical ideas.

Wolff begins by enumerating *three* distinct kinds of knowledge, which he places in perfect co-ordinate rank:—(1) Historical knowledge, or knowledge of facts; (2) Philosophical knowledge; and (3) Mathematical knowledge. Even when treating specially of philosophy, however, he admits that it starts from experience, and defines its purpose to be to explain the *ground* and *principle* of things as we find them. Philosophy properly so called, he divides into two great portions, theoretical and practical. Theoretical philosophy comprehends logic, ontology, cosmology, psychology, and theology. Practical philosophy treats of morals, jurisprudence, and politics. Let us briefly explain the meaning and limits of these different branches in the Wolfian acceptation of them.

1. *Logic.*—This is treated by Wolff as a science *mainly* on the basis of Aristotle, but *coupled* with an attempt to complete what Aristotle had left imperfect, and to mould the doctrines of formal logic into an organum which should comprehend *every kind* of reasoning, inductive, deductive, and mathematical. The three first figures, as originally propounded by Aristotle, are restored to their full authority, the fourth figure rejected as useless. In introducing mathematical reasoning as forming part and parcel of the ordinary logic, Wolff raised a new barrier against any real progress in logical science. Within the circle of mathematical quantities, the whole distinction of general and particular falls to the ground, and thus the *essential* difference between induction and deduction disappears. Whether we combine a number of mathematical parts into a whole, or separate a whole into its parts,—whether we add or subtract, multiply or divide,—the result is equally certain and equally definite. Not so with *general* terms in the ordinary sense. Here a single term may include any number of individuals, each having specific differences; and the accuracy of the conclusion depends upon a principle of generalization wholly different from what occurs in the case of mathematical quantities,

and based on the law of similarity. Wolff, not perceiving that all real improvement in the science of logic goes on the principle of separating the logical processes relating to quantity and quality into two different departments of reasoning, combined them into one. As a further consequence of this point of view, he made no specific study of induction, but treated it as a case of formal logic in the Aristotelian sense, and made its conclusions depend upon the same fundamental axioms.

This, then, was the instrument with which Wolff set out on his philosophical inquiries, and it did not, assuredly, augur well for their final success. Having once laid down his method, Wolff went on to apply it with singular industry and uniformity to every branch of moral inquiry. Whatever the subject might be, he began by defining the *terms*, and then proceeded to draw out, after the type of mathematical research, all his deductions one after the other, in exact conformity with his definitions. To see this, let us turn to the second department of philosophy, namely,

2. *Ontology.*—Ontology, according to Wolff, is the science of *being*. It begins with applying the fundamental formula of all certitude, the principle of contradiction. That which implies contradiction is the *impossible;* that which involves no contradiction is the *possible;* and when it appeals to experience as well as the reason, it becomes the *real.* Whatever exists is called *a thing;* that which is neither possible nor real is called *no thing.* Everything which exists has a *sufficient reason.* That which has its basis in the *essence* of a thing is called a property. Space is the co-ordination of existence; time arises from our own perceptions, indicating merely the subjective order of events. Things, as we see them, consist of parts following one another in a specific order, and are, therefore, *compounded.* Every compound must occupy space, possess length, breadth, and thickness, must be divisible, moveable, changeable, etc. All compounds are composed of simples. Every simple is a monad, and every monad has the power of self-action and self-determination.

In this way (the above is merely given as a specimen of the method), Wolff proceeds to define and complete

Leibnitz's doctrines of monadology and pre-established harmony, and to form a complete logical exposition of the *universe* and the *powers of nature.*

3. *Psychology.*—This branch of science is divided by Wolff into two parts—empirical psychology and rational psychology. Empirical psychology starts from observation; its aim is to distinguish and define all the various mental operations of which we are conscious, to arrange them in order, and show their proper functions and uses. The object of rational psychology is to define the nature of the soul, to show its relation to the body (pre-established harmony), to mark out the distinction between the human soul and that of the lower animals, to expound the groundwork of its personality and the certainty of its immortality hereafter.

Lastly, *Theology*, the crowning-point of all philosophical investigation, theoretically speaking, has to put into our hands the proofs of the existence of God, to show the dependence of the world upon His absolute will, and to explain (after the manner of Leibnitz in his *Theodicée*) the moral government of the world, the existence of evil, and the final state of perfection to which all things infallibly tend. Thus far theoretical philosophy.

The second main branch of philosophy, the *practical*, is treated of by Wolff with still greater detail and completeness than the theoretical. His moral system is based upon the fundamental principle, that whatever in human action tends to the greater perfection of our being is *good*, that which tends to its greater *imperfection* is *evil.* He distinguishes this idea of good, however, very decidedly from utilitarianism, making the perfection of our being the *ground* of our happiness, though not the *reason* why we seek for it. Perfection is desired for its own sake, and the love of it is grounded in a law of nature, which law is but an expression of the will of God.

The general complexion of the Leibnitzian-Wolfian philosophy requires very little labour either to expound or to comprehend. Its character is so definite that the simplest application of the logical faculty enables us to place the whole structure (massive as it is) before our view.

The primary object which Wolff had in view, no doubt,

was to popularize the doctrines of Leibnitz, by presenting them in the most tangible form, and by adapting them to the teaching of the Universities. It kept up, indeed, the old allusions and charms of Scholasticism, by placing everything in logical order, and employing the old logical terms; but by these very means it drove Scholasticism *proper* out of the seats of learning, and introduced itself into its place.

But if we next ask what was the real scientific value of Wolff's labours, and what they added to the sum of human knowledge, the answer does not lie far off. They added really *nothing at all*. They extended, indeed, the study of philosophy; they made it speak good German instead of barbarous Latin; they cleared away many false notions by making everything plain *as far as it went*; but they left the scope of human thought in other respects exactly where they found it.

All *speculation* properly so called, *i.e.* all really progressive and productive thinking, was laid asleep by the paralyzing influence of mere *system*. Everything was accurately defined; every problem, *to all appearance*, was solved; and every difficulty in the natural and moral world vanished before the light of systematic thought. The doctrines of philosophy were presented in a rounded form. One flowed, as by a perfect logical necessity, from the other; and the most complete intellectual satisfaction *appeared* to be thus secured. The equanimity and repose with which Wolff proceeded in his labours, heaping up one definition upon another, and drawing one conclusion after another, was something quite admirable. If any fundamental question came up, the principle of contradiction at once solved it, and then the logical play went forward peacefully and victoriously as ever. Professors accepted the system as the most perfect digest of philosophic truth; men of the world wondered at it, and saw no end to the story. Frederick the Great sent a special message, trusting that Professor Wolff would do him the favour of bringing the laws of nature to a termination as soon as possible; and Voltaire did not lose the opportunity of levelling his wit at the interminable dreariness of the German genius.

The truth is, the whole of Wolff's *Encyclopædia of the*

Sciences was *verbal* rather than *real.* There was no inductive research strictly so called, no real scientific inquiry, no grappling with the problems of existence, from the beginning to the end. Criticism fell to its lowest ebb; dogmatism reigned supreme. If we were to express the nature of Wolff's philosophy in the language of the later German systems, we should say that he treated every subject from the standpoint of the understanding (*Verstand*), and brought nothing under the critical ken of the reason (*Vernunft*),—that is, in plain language, Wolff philosophized simply by means of *words*, built up the most admired logical structures, but never penetrated beneath his definitions into the real nature of things themselves.

While the philosophy of Leibnitz was thus forced into the logical formulas of the Wolfian system, its real speculative significance became gradually lost. The original meaning of the monad; the universal aspect of the idea of pre-established harmony; the broad speculative conceptions by which Leibnitz essayed to maintain the homogeneity of the universe and solve the great problems of existence—all became flattened down to the commonplace categories of cause and effect, substance and attribute, instrument and purpose. Body and soul were separated as representing two distinct worlds of being; the laws and operations of the universe became simply the *means* to certain ends; all the mystery of existence, all the deep things of God, were practically disowned, and nothing but the flattest *naturalism* remained. Thus was generated a mode of philosophic thought which ended in the production of what has been so aptly styled as 'Rationalismus vulgaris.'

We should convey a very false impression of the labours and influence of Wolff if we represented him simply as a *systematizer* of Leibnitz. The Leibnitzian philosophy, in truth, came out of his hands very different, as an interpretation of the whole universe of truth, from what Leibnitz left it. It came to include a large element of uncritical *experience* on the one side, and lost equally in its speculative depth and completeness on the other. In the very outset of Wolff's preliminary discourse, we find ourselves virtually in a new territory, savouring largely of the influence which

Bacon and Locke had already exerted upon the thought of Europe. In place of holding up abstract ideas and principles as the absolute starting-point of *all* human knowledge, Wolff commences by claiming one whole department of truth as due to the direct teaching of the senses. By the aid of the senses, he affirms we come to know *what is* and *what takes place* around us. This we may term historical knowledge. But when we inquire for the ground or principle *why* things are as they are, we enter another region of inquiry, one which we may term the region of *philosophical* knowledge. All philosophical knowledge rests upon the great law of sufficient reason, for it comprehends everything for which we can assign a valid scientific reason why it exists. Then, lastly, when we deduce our truth logically from another already established, we may call this the sphere of mathematical knowledge, for it all flows from reasoning constructed after the method of strict mathematical demonstration.

From this first inventory of the respective spheres of human intelligence, we can already see the outlines of a whole system of philosophical truth faintly shadowed out before us. According to this, all knowledge begins in *experience*, for without experience we cannot know what is, or have any facts at all to account for. But the facts once being given, then the law of causality comes into operation, and teaches us to estimate what is grounded in right reason and what not—what can take its place as a portion of unalterable truth, and what belongs to the passing phenomena of the hour. Then, lastly, having got these fixed points to start from, we have only to develope them into the different branches of deductive science by a process of strict logical reasoning, and the work of the philosopher is complete. The whole Wolfian philosophy, when closely examined, is found to fall to the ground between two stools. It holds on to empiricism as the starting-point, but does not use our experience to initiate any *valid* inductive investigation; it holds on to abstract reasoning as the *method* of research, but employs it only in the flat formal logical acceptation, and thus shows no depth of speculative or inductive inquiry, either on the one side or the other.

This procedure is carried out through no less than twenty-three folio volumes. Having got his facts as given by experience, having applied the principle of sufficient reason to determine what can be regarded as the basis of fixed philosophic truth in each inquiry, Wolff proceeds mathematically to lay down his definitions and axioms, to deduce one proposition from another, and thus to build up a vast superstructure forming an entire encyclopædia of moral science. It is not difficult for any one to imagine, even though he never looked into a page of Wolff's writings, how imposing must be the whole building, and how infinitely tedious, scholastic, and mentally unsatisfactory the process by which it is erected. True, the Leibnitzian doctrines *appeared* all to be built up into the system; but how far that system was from realizing Leibnitz's lofty speculation need not now be further insisted on.

In the year 1738, *i.e.* sixteen years before Wolff's death, Ludovici wrote a history of his philosophy (*Entwurf einer vollständigen Historie der Wolfischen Philosophie*) in 3 vols. 8vo, in which he enumerates *one hundred works* already published by adherents to that school. We may judge from this how universal was the acceptance which the system found throughout Germany, and can easily imagine the vast number of other works (now happily sunk into oblivion) which must have appeared in the subsequent fifty years previous to the ruinous polemic of Kant. Still, notwithstanding the shallow dogmatism which this school favoured, and propagated through the length and breadth of the land, it would be wrong blindly to depreciate it, or regard it as having been any other than a benefit to the times in which it prevailed.

Those times were critical. The deistic writers of England—Collins, Tindall, Chubb, Shaftesbury, etc.—had penetrated, before the middle of the last century, into Germany, and had caused everywhere a restless dissatisfaction as to the grounds and the authority of the reigning Protestant theology. Added to this, Frederick the Great (who came to the throne in the year 1740) favoured the liberal reaction, and transplanted to Berlin some of the most prominent of the French deists, mostly adherents of the sensational

philosophy of Condillac and Helvetius. The age showed itself in Germany, as elsewhere, an essentially irreligious one; and the levelling doctrines of the French materialists in psychology, morals, and religion threatened for a time to gain the upper hand in the great Teutonic family. The reasoning of the English deists and the *persiflage* of the French both had their weight, and attracted on the one side the more learned, on the other the more fashionable classes of society throughout Germany.

The philosophy of Wolff was really the only barrier against which the waves of this foreign inundation of ideas were broken. So dead and petrified had become the theology of the Lutheran Church, so utterly uncritical and unreasoning the grounds on which it was ordinarily based, that it would have stood alone no chance whatever against the combined attacks of the French and English free-thinkers. Wolff, however, was made of stronger materials than most of his contemporaries; and although he had been in his time a victim to the bigotry of intolerant theologians who could not estimate his work, yet the very party which persecuted him were now fain to take shelter under the authority of his name, and the comparative *rationality* of his moral and theological opinions.

Wolff was himself a firm believer in Christianity, as Leibnitz had been before him; he was a man of the highest moral character, and a sincere adherent to the forms of religious worship. Hence in his entire writings nothing was to be found at all opposed to the Christian mysteries. His great object appeared to be to place the grounds of morality and of natural theology upon a *firm basis*, and to leave the essential parts of Christian doctrine untouched, to be accepted or not as might seem best by the religious consciousness of every individual and every age. Added to this, the philosophy of Wolff, working on the groundwork of Leibnitz, was firmly opposed to *materialism*, advocated the supreme authority of the reason at a time when sensationalism was making rapid strides, and held up a pure and lofty standard of ethics just when the reigning French authorities were reducing all morality to the most undisguised *selfishness*. All these advantages are not to be lost sight of in our

estimate of Wolff's influence upon his age; nor must we forget that, even though a special form of religious rationalism (*rationalismus vulgaris*) sprang, historically speaking, out of his teaching, yet this very teaching had been in all probability a bulwark against a philosophical inundation a thousand times more fatal to all human progress.

Putting together, then, the evil influences at work on the one side, and the efforts made by the Wolfian school to counteract them on the other, we may gain a tolerably correct bird's-eye view of the general tone and main features of the philosophical thinking of Europe about the middle of the last century, and previous to the influence which the writings of Kant soon after began to exercise so powerfully upon it. The lofty, speculative, and acutely critical spirit which had characterized the *renaissance* of philosophy in the sixteenth and seventeenth centuries had passed away. Commanding intellects like those of Bacon, Hobbes, and Locke on the one side, like Descartes, Spinoza, and Leibnitz on the other, no longer appeared. To master their respective principles, to put them in a clear light to the common understanding, to draw out their results in the various departments of thought, this was the highest problem which the age seemed capable of grasping or working out. But the great minds of the preceding age, though they had passed away, still had done their work, and left their impress on human society. Under the force of their reasoning, the old Scholastic doctrines had been shattered, the Middle Age principle of authority had been ruined, the current of the world's thinking was turned altogether into new channels.

Physical research, inspired to new activity by the Baconian philosophy, was marching onward to new conquests—conquests so brilliant that there is no wonder if the study of nature absorbed the attention of thousands, to the exclusion of all beyond it. The Cartesian school had exerted a power hardly less decided in another direction. The supremacy of reason had been here made valid over every other pretension, over experience, imagination, conscience, and faith, and had thus thrown all the higher inspirations of the soul into discredit and obscurity. Had the efforts and the guidance of the reason been maintained

in its *higher* intensity, as with Leibnitz,—had reason, in the sense of *Vernunft* (a sense in which it may include all that is loftiest in moral aspiration and religious instinct), been still in the ascendency,—no deterioration in human thought or feeling could have really taken place. But in place of this, every question was now brought down to the level of the common every-day understanding (*Verstand*). The higher reason would have maintained all that was most sacred in human nature, only clearing away the dross and bringing out what was essential to human greatness in stronger relief. But this loftier movement of philosophical criticism (as we said) had now, in the middle of the eighteenth century, passed away, and the great effort of every writer who attained any eminence was to bring the results of the philosophical thinking of the past down to the level of every-day life. In doing this, it swept away from amongst the people all the forms of ancient faith, and had nothing but a very commonplace system of natural ideas to put in their place.

The necessity of making popular and plain what had hitherto been accessible only to the cultivated and philosophic intellect of the day, produced, it is true, a most beneficial effect upon the style of literary composition. The writers of the day, instead of struggling with new problems and attempting to express their thoughts in very moderate Latin or rough uncultivated German, now sought to give a point and a polish to the language of common life, and to render the results of philosophy as attractive as possible to the ever-increasing mass of readers in the middle classes of society. Moses Mendelssohn, Gellert, and Abbt led the way in this reform of prose composition, and Lessing, Herder, and Wieland followed soon after. Indeed, from the attempt to popularize philosophy and carry its results amongst the people at large, may be dated the first great impulse towards the formation and rise of the modern German literature. This whole movement towards popularizing the doctrines of philosophy, is what is usually known by the 'deutsche Aufklärung,' the authors and abettors of which have been sometimes designated in England as the *illuminati* of the age. Perhaps I shall

take the English reader *best* into the centre of this whole tone of thinking, if I give a brief sketch of the writings of Moses Mendelssohn.

Moses Mendelssohn was born at Dessau in the year 1729, of Jewish parents. At that period an almost total separation existed in Germany between the Jewish and the Christian population. The former, denied the ordinary privileges of citizenship, became an exclusive class, associated only amongst themselves, formed a peculiar dialect, compounded of the German and Hebrew languages, repudiated all instruction except what was given by their own teachers through the medium of the Hebrew character, and based all higher culture upon the study of the Talmud. This was the school in which the young Moses was brought up. At Dessau there was a learned rabbi, named Fränkel, under whom he studied, making extraordinary proficiency in his knowledge of the Old Testament, of the Talmud, and of the philosophical works of Maimonides. So perfect was his knowledge of Hebrew, that in after life he had no difficulty in contributing to a periodical written in that language, and composed a logic in the same for the use of the higher Jewish schools.

At the age of thirteen he accompanied the Rabbi Fränkel to Berlin, lived in the greatest poverty until he was twenty years of age, dividing his time between any kind of occupation that could procure him sufficient food for bare existence and the prosecution of his studies. During this period he made himself acquainted with the Latin, French, and English languages, and laid the foundation for an extensive knowledge of mathematics and philosophy.

At the age of twenty-one he procured a situation at a silk warehouse, where his services were only required about six hours per day, and where he received what was, for him, ample means of support and comfort. In this establishment he remained, highly esteemed for his probity, all the remainder of his life. In the year 1754 he had the good fortune to make the acquaintance of Lessing, who at once recognised in Mendelssohn a man of noble character and highly intellectual bearing. Under Lessing's guidance, Mendelssohn made systematic progress in self-culture, and

soon had occasion to show how thorough that self-culture had really been.

Amongst other books, Lessing gave him to read a copy of Lord Shaftesbury's *Characteristics of Man.* The charm and flow of the style delighted him, and he set to work to compose some dialogues, which should combine in the same way philosophical depth with the greatest purity of diction. Lessing was delighted with these attempts, and at once had them printed without the author's knowledge; and thus it was that he entered unknowingly upon the world of literary authorship.

These dialogues show that the mind of Mendelssohn had been dwelling long amongst the ideas of Spinoza and Leibnitz. He had been forcibly, perhaps equally, attracted to *both*, and now experienced the necessity of *thinking himself clear* upon the points of similarity and of difference between them. The main object of these dialogues is to compare the principal features of those two great thinkers together, to show in what respect the Leibnitzian principles were involved in the doctrines of Spinoza, and to detect where the πρῶτον ψεῦδος lay, which led the latter into his rigid and acknowledgedly untenable hypotheses of pantheism and moral necessity. The work is chiefly remarkable, first, as being the production of so young and untrained a writer; and secondly, as illustrating the power he possessed, and afterwards still further cultivated, of presenting his thoughts in the most attractive and insinuating form.

Mendelssohn's next work was a memoir, sent to and crowned by the Academy of Science at Berlin, on *Evidence in the Metaphysical Sciences.* In this treatise he proceeds still on the basis of the Leibnitz-Wolfian philosophy, showing that the evidence we have of mathematical truth depends upon an application of the principle of contradiction drawn out into detail; and that when we proceed from quantitative to qualitative analysis, the same principle holds good, only beset with far more difficulty in its practical application. He concludes by basing the evidence both of morals and natural theology upon the fundamental principles of reason, developing and placing in a clearer light the doctrines which Wolff had already laid down in his *Encyclopædia of Sciences.*

The work, however, which of all others brought Mendelssohn into public notice as a philosophic writer was his *Phædo*, or dialogues on the immortality of the soul, occasioned primarily by the death of his friend Abbt. The idea of this composition was a bold one, and needed great skill to work out. It is partly a translation of the *Phædo* of Plato, but it substitutes, in the more important and argumentative portions, where Socrates discourses on the immortality of the soul, what he regarded as the most real and cogent arguments for immortality, in place of those brought forward by Plato himself. The spirit of the Platonic dialogue is kept up throughout with wonderful beauty, and the whole work shows a polish and perfection of style quite unusual at that period. The arguments he urges are partly metaphysical and partly moral, partly based upon the separate existence of the soul, its fundamental attributes, its unity, the impossibility of annihilation, etc., and partly upon the moral phenomena of human life, the distinction of good and evil, the natural aspirations we have after perfection, and the necessity of a future life in order to satisfy the exigencies of moral law in the apportionment of reward and punishment. The work spoke, at any rate, to the spirit of the age, was translated into several languages, and spread the author's fame as a writer of extraordinary merit more or less throughout the whole of Europe.

We pass over now several minor publications, such as those on the feelings, on the philosophy of the fine arts, on Pope as a metaphysician, etc., and shall refer simply to his last and in many respects his most important effort in the department of philosophy,—I mean the Morning Lectures (*Morgenstunden*). These lectures were professedly designed to establish the proofs of the existence of a God; but they really include a complete statement of Mendelssohn's philosophical views, leading up step by step from first principles to the great conclusion at which he aimed.

They commence by starting the question, What *is truth?* To answer this he goes at some length into an explanation of the different *kinds* of human knowledge. First there is the knowledge we gain *immediately* by the senses. This is intuitive, and may be pronounced in many respects *certain;*

but still no definite limits can be fixed to it with anything approaching to accuracy. Secondly, there is purely rational knowledge, that which depends upon the very laws and essential processes of the understanding. This knowledge is purely abstract and absolutely certain, as we see in the case of mathematical science. Thirdly, there is the knowledge of the real, comprehending all the conclusions we can draw, inductively or deductively, by means of the understanding, respecting the laws of nature and the outward world. Having discussed the evidence on which each of these kinds of knowledge rests, he draws the final conclusion that truth consists of knowledge of every kind, so far as it has any positive faculty of the soul for its foundation; and that untruth, on the contrary, consists in ideas which have suffered change through the incapacity or limitation of our positive faculties. Mendelssohn differs here from Wolff, inasmuch as he does not admit the principle of causality amongst our *à priori* principles of knowledge, but bases it upon experience and induction.

Having cleared the way by a discussion of the principles of human knowledge generally, Mendelssohn proceeds to the main subject of his lectures, viz. the existence of a God. He commences by criticising the principal systems of philosophy and natural theology which had been already propounded, shows the relative use of speculative reason and common sense (giving the decided superiority to the latter), discusses with great acuteness the respective principles of the idealists, the epicureans, and the Spinozists, and concentrates his own fundamental doctrine into the following axioms:—

I. Whatever is true must be acknowledged as such by a positive faculty of thought.

II. *That* cannot be said to *exist* whose existence is not vouched for by a positive faculty of thought.

III. That *must* exist whose non-existence cannot be imagined by a reasonable being.

IV. If a proposition (A = B) is true, there must be a recognised connection in thought between the subject A and the predicate B.

V. This connection rests either upon the matter of our knowledge of subject A, or upon the form.

VI. If, therefore, the *real existence* of any idea A is affirmed, then A must be a reality, either because it is only thinkable by means of this predicate, or because it cannot otherwise be an object of intellectual approval.

VII. From this it immediately follows, that if the proposition A is not B, is equally thinkable with the proposition A is B, the latter can only be pronounced true in so far as it is the best, and has been chosen, approved, and brought into existence by a free agent. In other words, of two thinkable or possible things, that can only be the *real* which is the *best.*

The use which Mendelssohn makes of these axioms in his natural theology is this. In the world of nature, as in that of human existence, we are surrounded by a vast multiplicity of facts which do not come at all under the category of *necessity*, but which are purely contingent. The question then comes, How are we to explain these phenomena? It is quite possible, *à priori*, that every natural object should have been formed, in some respects, different from what *it is;* quite possible that the human faculties and feelings should have borne a different stamp from what they actualily do; quite possible, in a word, that the universe we live in should have been another kind of universe. Why is it not so? Did it chance to come as it is? What is chance but a mere word which covers our own ignorance of causality? Has the universe always been one and the same? No; we see a thousand events in nature occurring which might have occurred differently. Or are things connected together in an infinite series of cause and effect? If so, why are they connected in *this way*, and in no other? The only possible solution of the phenomena is, that the universe exists as it does by free *choice.* Then there must be a chooser, then there must be a supreme intelligence and will—that is, there must be a *God.* It will be apparent at once that this argument approaches far more nearly to Kant's standpoint of the practical reason than any of the ontological reasonings which went before in the Cartesian and Wolfian schools of philosophy.

All the reasonings of Mendelssohn, however, and of those who attempted to apply the Wolfian metaphysics to the great questions in morals and natural theology, failed to meet the requirements of the age, and to raise a bulwark against those writers who were sapping the foundations of all human truth. The flood of scepticism rolled ever onwards. Bayle and the French writers of his class made sad havoc of the ideas upon which the illuminati essayed to build up their moral and religious system, and deluged Germany as well as France with their principles. Hume, in like manner, in our own country, by means of a still more acute and metaphysical strain of argument, undermined all the fixed laws of belief, and left nothing standing but a succession of subjective feelings and impressions, to which alone he attributed infallible certainty.

It was this last effort of scepticism which awakened out of his dogmatic slumbers a thinker who was destined, ere long, to hold in check the shallow rationalism as well as the empirical sensationalism of the age, and turn the whole thought of Europe into a deeper channel. That thinker was Emmanuel Kant.

CHAPTER III.

Immanuel Kant.

I.

JUST about the middle of the eighteenth century, the name of Immanuel Kant begins to be heard as carrying with it some weight and influence in the strife of human thought. Kant was born on the 22d of April 1724. The place of his birth was Königsberg, the spot which was likewise the scene of all his subsequent labours, and which his name has since rendered illustrious in the world of philosophy. Königsberg is a somewhat old-fashioned city, formerly the capital of the whole province of East Prussia, and numbering at present about 60,000 inhabitants. It stands, like Rome, on seven hills, but the country around is flat, and the climate moist and chilly. Geographically speaking, it overlooks well-nigh the uttermost northern verge of modern culture.

Socially speaking, Kant's birth was by no means illustrious. His father was a saddler by trade, whose family had migrated from Scotland a few generations before. Up to the time when our philosopher was born, and some years, indeed, later, the original spelling of the name Cant was always retained. Kant himself changed it, to avoid, he said, the chances of mispronunciation. The name Cant is still found not very unfrequently in the northern portions of Great Britain.

The mother of the philosopher was of a genuine North German stock. Her maiden name was Regina Dorothea Reuter. In worldly circumstances the parents of Immanuel Kant were poor, though not needy. The family consisted of four daughters and one other son, who subsequently became a teacher, and then a Lutheran clergyman in

Curland. Of these five children Immanuel was the youngest but one.

We are here almost inclined to pause and ask what there could possibly be in such a home, and in the circumstances of such a family, to nurture up a mind for so commanding a height of philosophic culture. Something perhaps may have been due to the blending of the Scottish and North German blood, and the proclivities inherent in both to scientific and abstract thought. But apart from this, Kant's early life was by no means unadapted to inspire at once mental independence and moral elevation. The father was a man of simple habits, rigid integrity, and Christian principles. The mother also appears to have been a woman of uncommon excellence, possessing a high tone of thought, and an elevation of character far beyond what is usual in her own, or indeed in any other rank of life. The secret of this lay in the fact that she was ardently attached to the principles and habits of the Pietists of that day. The names Pietist and Pietism were no doubt originally given as terms of reproach, and cause enough for reproach there may naturally have been amongst many who bore that appellation. But it is always well, in the case of sobriquets of this kind, to look away from the judgments of opponents and try to discover what of truth and goodness may lie underneath them. The Pietists, as a sect within the Lutheran Church, undoubtedly arose out of a natural reaction against the stiffened formalism to which that church had become reduced at the beginning of the last century. They bore, therefore, the same relation to the Lutheran community abroad as Methodism somewhat later bore to the Church of England at home. The originators of the movement, Spener, Franke, and Gottfried Arnold, were men of genuine Christian character, and sought to substitute for mere verbal orthodoxy the religion of feeling, fervour, and benevolent action. It was just in the first blush of this new religious movement, before it had become tainted either with hypocrisy or fanaticism, that Kant's mother was brought under the influence of one of its most active promoters, Dr. Albert Schultz. Schultz was at once an eloquent preacher and an enlightened educationist, and it was undoubtedly under his

advice and guidance that the young Immanuel was destined by his parents to the college and the church. In 'free and enlightened' England, such a thought would, of course, be simply absurd. How could a humble saddler, with five children to provide for out of a slender income, harbour the bare idea of sending any son of his to the high school and the college, and of seeing him eventually assume the clerical dignity? But in Germany this is no unusual procedure. The best educational establishments there, from the town school up to the University, are open to all, and at a rate of expenditure which brings them within the reach of every citizen raised at all above the mere labouring classes.

Kant was thus from a child destined for the church, and his pietistic mother, inspired by such a prospect, used all her influence to imbue his mind with noble thoughts and high religious purposes. Of these attempts, Kant ever retained a lively recollection. 'My mother,' he remarked, late in life, to one of his friends, 'was an affectionate, kind-hearted, pious, upright woman, as well as a tender parent, one who directed her children into the way of piety and truth by religious instruction and a virtuous example. She oftentimes conducted me out of the town to show me the works of God, spoke with pious rapture of His power, wisdom, and goodness, and impressed my heart with a deep reverence for the Creator of all things. Never shall I forget her; for she it was who planted and nourished in me the first germ of goodness, who opened my heart to the impressions of nature, who awakened and enlarged my ideas, and by her teaching exerted a beneficial influence over my whole life.'

On other occasions, Kant would speak in similar terms of the stern and rigid morality which prevailed in his early home; of the scrupulous integrity of his father in all his commercial transactions, and the truthfulness which pervaded all his words and deeds. 'Never,' said he, 'did I witness from my parents, even in the smallest particular, anything unworthy or improper.' Everything in his early home appears to have been directed according to that inward *imperative* which Kant in later life elevated to the principle and basis of all moral truth. We see here how

close was the connection between a right disposition of the will and the feelings towards rectitude on the one hand, and sound moral theories on the other. The humble saddler in his shop was as much the author of the 'practical philosophy,' which based itself on the categoric imperative, as the professor in his chair. *He* first possessed it as an inward principle, as a determination of the will towards the good and the true; all that the philosopher afterwards did was to elevate what already existed there in its fresh and vital spontaneity into a connected system of abstract ideas.

II.

Kant's first instruction was received in the Hospital-Schule of his native town. His mode of life, and all the details of his mental progress in this early period of his history, are now enveloped in a cloud of oblivion. His parents, unconscious of his future fame, were not careful to treasure up the everyday events of a schoolboy's life, and Kant himself was by no means one to communicate to the curious the details of his procedure at the free school, or in the saddler's humble abode. We may conjecture, however, that he made satisfactory progress in his studies, since at eight years of age he left the preparatory school, and was received into the Collegium Fredericianum, of which Dr. Schultz was the director. The next eight years of Kant's life, namely A.D. 1732 to A.D. 1740, were spent in such studies as are usually pursued by those who enter the German Gymnasia with a view to some future profession. By the dim intimation of minor events alone can we conjecture what was his course of life during this period. His chief pleasure appears to have been in the study of Latin literature, and so deeply did he drink into the spirit of it that he used to read the Latin authors with delight even to the latest period of his life, and frequently recited long passages from the poets, which he had early committed to memory, without the least hesitation.

His two most intimate companions were Rhunken, afterwards so celebrated as a classical scholar, and Cunde. A slight circumstance which has been preserved from Kant's table talk, shows that there must have existed in him at

this time an eager longing for literary eminence. The three friends were conversing one day as to how they ought to write their names when they should grow up, and indite learned works on classical literature. Rhunken, it was agreed, was to be Rhunkenius; Cunde, Cundeus; and Kant, Kantius. The first of the three, as the learned world knows, kept his word; and it is said that on more than one occasion he deplored the loss of Kant's early classical aspirations, expressing, at the same time, his high idea of the services such a mind might have rendered in the department of the *literæ humaniores*, had not Philosophia led his affections into the *wrong* path.[1]

In his thirteenth year, Kant had the misfortune to lose his mother, who fell a sacrifice to the noble devotedness she showed in attending the sick-bed of a friend. His father appears to have been then in very moderate circumstances, having five young children to provide for. An uncle, however, who probably had no family of his own, gave the young scholar needful support, and kindly continued it to him while at college, and even on various subsequent occasions, as circumstances required.

Thus, then, prepared by a sound classical training, and moderately supported by his uncle's benevolence, Kant entered the University of Königsberg at the opening of the winter session of 1740. And here his mind began to take a wider range, and to become more deeply interested in scientific pursuits. In addition to a diligent continuance of his classical studies, he began to devote himself with ardour to mathematics, physics, and philosophy. The teacher who worked most actively upon his mind was Martin Knutzen, professor of mathematics and philosophy in the University of Königsberg. Next to him, the lectures of Teste, professor of physics, appear to have attracted his attention. Indeed, physical science in all its branches was a favourite pursuit of Kant during his whole life. His own lectures on physical geography were those in which he ap-

[1] Rhunken retained a much less affectionate remembrance than Kant did of the Collegium Fredericianum and its pietistic discipline. He terms it in one of his letters, preserved by Dr. Rinks, a 'tetricam, quidem, sed utilem tamen nec pœnitendam fanaticorum disciplinam.'

peared, as a professor, to take especial delight; and every fact which positive science revealed during that most fruitful age—the age of Leibnitz and Newton—was apprehended and treasured up by him with the greatest avidity.

As Kant was intended to enter the church, he began, after one or two sessions, to attend the theological faculty. The only course in this department of which any particular mention is made in his life, is that of Dr. Schultz, a celebrated Wolfian, on dogmatics. So diligently did Kant apply himself to these lectures, that he repeated and expounded them to a class of his fellow-students, in order to procure some little aid towards his continuance in the University. But Knutzen's instructions still remained for him the chief incentives to intellectual labour. It was here he found the food for which his mind most ardently longed, and here that his future course of intellectual activity was chiefly determined. The ardour with which he pursued the more recondite questions in mathematics and physics is shown by his first attempt at authorship. During the last year of his college course, he wrote a treatise (published with the date 1746), the full title of which is as follows:—'Thoughts respecting the true estimation of the living forces, and a critique of the proofs which Leibnitz and other mathematicians have employed in this controversy, together with some preliminary considerations which relate to the power of bodies generally.'

The question of the *vis viva* residing in material bodies was a great point of dispute previous to the Newtonian discovery of the laws of gravitation; and although Kant was well acquainted with the Newtonian philosophy, he was not yet out of the trammels of the school which based itself on the authority of Descartes, Leibnitz, and Wolff. He proposes, therefore, in this *Jugendschrift*, to compare their doctrines on the laws of motion, and show, by an appeal to nature, in what respect each was right and each wrong. Descartes considered the universal law of motion to be expressed by a direct ratio between the spaces and the times; Leibnitz by a ratio between the spaces and the squares of the times. Kant's object was to show that the Cartesian law was true for certain cases (cases, namely, of

uniform motion), but that the Leibnitzian law was true for cases of accelerated motion. The whole controversy has, of course, no further interest to us, the question having long been merged into and solved by the general laws of dynamics. Our principal object in referring to it is to point out the glimpses it gives us into the critical power and mental independence of Kant in this early period of his life. The preface of this little treatise contains a kind of apology for impugning the judgment of men so eminent as Descartes and Leibnitz; and amongst other striking remarks, he utters the following sentiments as those which he had adopted for the guidance of his own mind in the pursuit of truth. 'I am of opinion,' he writes, 'that it is, on occasions, by no means useless to place a certain noble confidence in our own powers. A trust of this kind vitalizes all our efforts, and imparts a kind of stimulus which is greatly conducive to the free investigation of truth. Here, then, I take my stand. I have already marked out the path which I desire to keep. I shall henceforth enter upon this course, and nothing shall hinder me from continuing in it.'

Such language would ordinarily savour of presumption in a young student of twenty-two years of age; but such was far from being the case with Kant. He was singularly modest in his pretensions, and, although conscious of his own mental powers, yet never presumed upon them beyond what he could justify by the results of patient investigation and penetrating insight. His was a rare spirit, formed by nature to worship truth more than authority,—one, too, which combined with this the unbending power of will to follow out his purpose through a lifetime, without the least swerving to the right hand or to the left.

III.

We have before shown that Kant had enrolled himself in the theological faculty. In pursuance of his plan of entering the church, he had studied theological science with commendable diligence, and had occasionally gone out into the country to exercise his powers as a preacher. But now that he had finished his course of study, and could no longer calculate upon his uncle's timely support, he naturally

looked around to find some sphere of honourable industry by which he could obtain a decent livelihood. A vacancy occurring in the Cathedral School, he became a candidate for it, but was unsuccessful. A person considerably inferior to himself appears to have superseded him. From this time, Kant gave up all idea of pursuing the clerical profession; he accepted a situation as private tutor, some few miles from Königsberg in the country, and quietly devoted all his leisure time to uninterrupted study.

It may be interesting for us to inquire what were the principal studies to which Kant devoted his mind during these nine years of rural quietude and repose. His regular duties as a tutor must, of course, have absorbed some hours of every day, and have kept the literary side of his character in full activity. But his private studies were evidently dominated by the purpose he ever kept in mind, of returning to Königsberg and obtaining a professor's chair in the University. This purpose, combined with his own natural tastes, led him, evidently, to the deeper study of mathematics and physics. Newton was evidently the master mind under which he worked; and he must have become, during this period of his life, thoroughly acquainted with his entire philosophy of the heavens.

An opportunity occurred during the last year of his tutorship to make some practical use of these Newtonian studies. The Academy of Sciences at Berlin gave out in the year 1754, as the subject of a prize essay, the question, 'Whether the earth, in its rotation round its axis, has suffered any change from the period of its origin, and, if so, what is the cause, and how may we be certified of it?' To this question Kant sent in a reply, which was afterwards printed; and in the same year he added another memoir on the question, 'Whether the earth is growing old? and whether it contains in itself the germ of its own final destruction?' In his treatment of both these subjects, Kant shows clearly the cautious and critical tendency of his own intellect. His object is not so much to prove either one side of the question or the other, but to give a critique on the nature of the evidences on which either alternative can be affirmed or denied. The conclusion he comes to is, that there is no

evidence presented in the case which can possibly lead to a sure decision—in other words, that the questions are not *answerable.* Conjectures there may be, and even probabilities; but if we require *proof* leading to certitude, for this there are no sufficient materials at hand. We see here at work that same characteristic feature of thought which accompanied Kant through his whole life. His mind did not permit him to labour at the solution of any problem until the terms of the problem were well defined, the possible evidences estimated, and the grounds on which an intelligible conclusion could be come to thoroughly laid bare. His intellect was from the first of the critical order, wholly opposed to dogmatism in any direction, and utterly dissatisfied with any opinion, the foundations of which were not deeply and immoveably planted on the primary laws of human conviction.

And yet, wherever the possibility of a thorough investigation existed, Kant was bold to follow it out, however far the results might be from the then accepted conclusions of science or philosophy. This is seen in a larger work, which he published in the next year (1755), entitled, *A Universal Natural History and Theory of the Heavens; or, an Attempt to show the Constitution and Mechanical Origin of the Universe, according to the Principles of Newton.* The laws by which the planets move in their orbits had been evolved through the researches of Copernicus, of Kepler, and of Newton; but none of these had entered scientifically upon the further question how the universe *came into existence.* Newton, when he had carried his investigations to their farthest limit, and laid open to the human intellect the whole of the structure and movements of the solar system, stood still to adore. He seemed to have reached that point where the *divine power* became manifest; nay, he reverently pointed to the fact that it was possible to calculate the exact momentum which the divine arm had first given to bring all the planets into play within their several courses. But Kant saw plainly that if the mathematical and dynamical laws of the universe were good to explain the *motions* of the heavenly bodies, they might be good for much more. The same laws which guide their

movements might also have presided at their *origin.* In a word, given the *fact* of matter to start with, the sun, moon, and stars, he saw, may have been brought into existence by the application of those very same laws which govern and sustain them to the present day.

This treatise on the heavens was written six years before De Lambert wrote his *Lettres Cosmologiques sur la Constitution de l'univers*, in which very similar views were propounded. Kant, so far from feeling annoyed that so little regard was paid to his own original efforts, whilst the work of De Lambert was received with wonder and admiration, testified nothing but the most lively joy that the great thoughts in which he had delighted, and the theories over which his own imagination had silently roved, should now be confirmed by the first astronomer of the age (see his correspondence with De Lambert). Kant was far, however, from sharing the atheistical tendencies of his French contemporary. He united too much reflective power with moral aspiration to content himself with regarding nature as a vast machine, with no infinite mind or beneficial purpose behind it. The remarks with which he anticipated the objections of those shallow enthusiasts who look upon secondary causes as something savouring of irreligion, may be profitably repeated even to the present day.

'No one,' says Kant, 'can contemplate the universe without observing the admirable order in its structure, and the surest proofs of the hand of God in the perfection of its relations. Reason, when it has stood in admiration at so much beauty and so great excellence, becomes righteously indignant at the rash folly that can allow itself to ascribe all this to a happy *chance.* The highest wisdom must have made the plan, and an infinite power executed it, otherwise it would have been impossible to find so many consentaneous purposes in the whole structure. The question for us, however, to decide is, Whether the plan of the conduct of the universe has been laid by the Supreme Intellect in the essential principles of eternal nature, and planted in the essential laws of motion, so as to develope itself unconstrainedly in a manner consonant with the most perfect order? or whether the general properties of the elements

of the universe have a total incapacity of agreement, and no tendency whatever towards a mutual connection, but require, on the contrary, absolutely a foreign hand to bring about that restriction and combination of the parts which exhibit all this perfection and beauty? An almost universal prejudice has prepossessed philosophers against the capacity of nature to bring about any great result by means of universal laws, just as if it pronounces the government of the world godless when we seek for the original forms of things in the powers of nature, and as if this power were a principle wholly independent of divinity—a blind, eternal fate!'

Such, then, were some of the studies in which Kant delighted during the period of his country retirement.

The nine years which he spent as private tutor present one uniform aspect of patient industry and mental effort in the work of self-education. He followed the even tenor of his way, undisturbed by the dreams of ambition, satisfied that he had the inward power and resolution to carry out that course of intellectual research on which he had entered, and which he openly declared nothing should hinder him from pursuing.

Kant used in after life to make merry over his former doings as a tutor to young children, and often declared his opinion that he must have made the very worst elementary teacher in the world. Of his own studies, however, during this period of his life, he always spoke with the greatest satisfaction. Here it was, whilst undisturbed by society, careless of the future, surrounded by all the influences which to such a mind solitude and nature must ever present, that he laid the solid foundation for that world-wide eminence and renown to which he afterwards attained.

IV.

In the year 1755 Kant completed his engagements as a private tutor. The time, he considered, had now arrived for realizing the fixed purpose of his life—that of becoming a professor in the University of his native town. It may be as well to state, for the information of those who may be unacquainted with the constitution of the German Universities, that a successful student in any department, who

intends to devote himself to the higher teaching, obtains permission to open a class within the precincts of the University, for which he is paid simply by the very moderate fees of the students who choose to attend it. Should his lectures gain approval, and his abilities be well tested, he looks forward to a regular appointment as Professor Extraordinarius, with a fixed salary as well, and then works his way up to the highest positions according to his capacity as a scholar and a teacher.

The first thing to be accomplished by Kant on his return to Königsberg, was to get the legal qualification necessary for holding a University professorship of the first kind. With this view he took his degree on the 12th of June 1755. According to the usual method adopted and still followed in the German Universities, Kant composed a Latin thesis, and discussed it in the common hall before the professors, who were appointed at once to decide upon and testify to his merits as a doctor of philosophy. The subject of the thesis was 'Heat, and its Place in the Economy of Nature.' On the 27th of September in the same year, he delivered and defended a second thesis, entitled, '*Principiorum primorum cognitionis metaphysicæ nova dilucidatio.*' By an order from the Minister of Instruction, dated 1749, it had been decided that no one could be appointed Professor Extraordinarius who had not publicly defended three several theses. To fulfil this condition, Kant wrote a third treatise on the subject of 'Monodology' (a point then much mooted amongst the adherents of the Leibnitzian philosophy), which he defended in April 1756; and after this he at once sent in his application as a candidate for the next professorship of mathematics and philosophy.

Of these three essays, the first and the third are hardly more than college exercises, and both relate to matters now of comparatively little interest respecting the physical constitution of bodies. The progress of chemical science has rendered the mere speculative treatment of molecular questions wholly unpopular, if not useless; and no one would now care to build up a superstructure of philosophical ideas based upon either the geometric or the dynamical definition of matter. With regard, however, to the other

treatise to which we referred,—I mean the '*Nova dilucidatio; or*, The Exposition of the First Principles of Metaphysical Knowledge,'—this is interesting as containing Kant's first utterances on any question of a purely metaphysical nature. We must keep in mind that Kant writes at present entirely from the standpoint of the Leibnitzian-Wolfian philosophy. In this school he had been brought up, on these principles his whole education had been conducted, and there was nothing, as yet, to interfere with his respect for these traditional ideas, except his own penetrating power of thought within, and the influence of the Newtonian physics without.

Wolff had based all human knowledge upon three fundamental formulas, which he termed respectively the principle of identity, the principle of contradiction, and the principle of sufficient reason—that is, we may affirm that B is identical with A; or we may affirm that B is different from or contradictory to A; or we may affirm that B follows necessarily from A as the cause or sufficient reason of its existence. All our rational knowledge, according to Wolff, is reducible to one of these three forms. In other words, every statement must be an affirmation of the identity of one thing with another, or a contradiction of such identity, or a declaration that one thing is the cause or effect of another. This is the question which Kant now proposes to investigate anew. On the first two of Wolff's fundamental principles he has not much to remark. He merely rebuts the attempt which had occasionally been made to reduce them to one fundamental category, and shows that the affirmation of identity and of difference are necessarily two different mental processes. It is when he comes to the law of sufficient reason or causality that he begins to strike off some new metaphysical sparks, hardly consistent with the orthodox Wolfian doctrine.

Every effect must have a cause. This was a principle maintained throughout the Wolfian school with an unlimited application. But if every effect must have a cause which actually determines it, then every human action must have a determining cause; and if every human action be determined, then none can be regarded as unconstrained and *free*. The doctrine of necessity thus pervaded the whole

of the Leibnitzian school, as it had pervaded the philosophy of Leibnitz himself. This doctrine of sufficient reason, as applied to human actions, had been called in question by Crusius, who attempted to show that, by cutting at the root of human freedom, it destroyed the entire moral character of human life, and rendered responsibility impossible. Kant's object in the treatise just referred to, was to show that there is a middle path which avoids the difficulties on both sides. With regard to the doctrine of sufficient reason, he still felt himself constrained to uphold the principle as one of universal application, viz. that every effect must have a cause, and conversely, that every fact must have flowed out of some other fact which preceded it. But then he attempts to contravene the moral results which Crusius deduced by removing the cause from the outer to the inner world. 'True,' he says, 'our volitions must have a cause; but where is it? It is not any mere external fact. That which determines our voluntary actions are habits, tendencies, emotions, and reasonings. But whatever is determined by the mind itself in its various phases and affections, is fundamentally free and unconstrained. Hence both sides of the alternative may be true; we may have our actions determined on the one side, and yet those actions may be free on the other.' Kant is here evidently struggling against his chains; he is still within the region of philosophical necessity, much in the form in which it was left a legacy to his age by Leibnitz, but yet manfully exercising his critical proclivities to find a passage into some freer and loftier moral region.

Another important point in which Kant attempts some correction of the philosophic dogma of sufficient reason in which he had been educated, is his maintaining and confirming the distinction which he had already drawn between arguing from a sufficient reason *antecedent*, or one subsequent to the event. All causes are in nature chronologically antecedent to their effects; but it sometimes happens that the ground on which we judge an affirmation to be true is subsequent to it. If I see a flash of forked lightning, I judge that thunder will follow. The one event is the real ground of the other. But if I hear the thunder first, I

judge with equal certainty that the lightning has preceded it. The one is the *ratio determinans*, the other the *ratio cognoscendi*. Kant did not, indeed, carry out this distinction to any of its further consequences; but we may now note it as the first symptom of that train of analysis which afterwards led to his well-known doctrine of analytic and synthetic judgments. There is one use, however, which he makes of it, and that is to confute the ontological proof of the existence of God as propounded by Descartes, and relied on by so many of his followers—namely, that because the idea of a God is the idea of an all-perfect being, therefore He must be thought of as *existing*, otherwise one perfection, at least, would be wanting. This procedure Kant shows to be a complete confusion of the real and ideal ground of the divine existence. It gives us a *ratio cognoscendi*, but then treats it as though it were *ratio essendi*. The only ontological proof he admits at this stage of his philosophical career, lies in the power we possess of rising from the idea of the contingent to that of the necessary and absolute existence, the latter idea being logically involved in the former. But these topics will come under review more fully at a later stage of our inquiry.

No sooner had Kant fulfilled all the conditions than he commenced his career as a *Privat-docent*, by announcing classes to be held in his own rooms. The subjects he sèlected were mathematics, physics, logic, and metaphysics. Borrowski, to whom we are indebted for an invaluable little biography, most of which Kant corrected with his own hand before his death, was present at the very first lecture, and gives us so interesting an account of it that it is best to quote the passage entire:—

'I was present as an auditor in the year 1755 at Kant's first lecture. He was then living in the house of Professor Kypke, and had there a large auditorium, which, together with the passage and the stairs, was filled with an almost incredible number of students. This appeared to embarrass Kant greatly. Unaccustomed as he was to the whole thing, he lost almost his whole confidence, spoke lower than usual, and corrected himself frequently. . . . In the next lecture it was quite different. His manner, as it always remained

afterwards, was not only thoroughly to the purpose, but free and agreeable. The compendium which he used as the basis, he never followed slavishly, and only so far as to follow the author's *order* in adding his own remarks. The fulness of his knowledge often led him into digressions from the main topic, which were always highly interesting.'

In his lectures, Kant was far from confining himself to the abstract sciences. He took the greatest delight in everything relating to the natural history of mankind and of the globe on which we live. It was just at this time that the great earthquake occurred at Lisbon, which catastrophe, accompanied as it was by many minor shocks in almost every part of Europe, had given rise to superstitious fears amongst the ignorant, and even doubts as to the stability of the earth itself. Kant undertook to expound the whole theory of earthquakes in a series of articles published weekly, in which he gave a *resumé* of all that was then known of them, and showed that such upheavings were part of the whole system of the world; and that, so far from endangering the welfare of mankind, they answer a wise and beneficent purpose in the economy of nature. The whole of his exposition is quite in the spirit of our modern science, with all the light which geology has since shed upon it.

About the year 1760, Kant began to extend the range of his teaching much beyond the narrow circle of the abstract sciences above alluded to. He announced, first of all, courses of lectures on anthropology and physical geography. For these subjects, as bearing upon the central point of his thoughts,—namely, human nature,—Kant had an enthusiasm quite equal to that which he bore to metaphysical investigation. Though he never travelled, and never went above a few miles from his birthplace during his whole life, yet his acquaintance with the world at large, and especially with *man* in all his numerous varieties, was extensive and minute. He devoured books of travel, descriptions of foreign countries, information of all kinds about every region of the globe, until his knowledge was as minute and exact as it could be, short of a personal acquaintance. He is said, in one of his conversations, to have given so exact a description of Westminster Bridge (then

newly erected), that an Englishman who was present took him for an architect who had spent some years in London. There was not a country on the face of the globe, not a tribe of men then known, respecting whom he did not possess the most detailed knowledge; and all this knowledge was pressed into service in his general estimate of human nature. His lectures on these subjects always drew a large number of hearers, and that not only students, but men of riper years, military men, and civilians; and, it is well known, the notes of his lectures were sent far and wide for the benefit of some who wished to profit by them at a distance. The Prussian minister, Von Zeidlitz, was a great admirer of Kant, and appreciated his knowledge of men and things highly; and to him it was partly owing that the Kantian ideas found favour in high places, and became expanded throughout the German Universities much earlier, in all probability, than they would otherwise have been. He writes to the philosopher from Berlin as follows:

'I am now hearing a course of lectures on physical geography by you, my dear Professor Kant, and the least I can do is to return you my thanks for them. However strange it may appear, as I am some four hundred miles distant from you, I must candidly admit that I am in the position of a student, who is sitting a good long distance from the professor's chair, or who is not yet accustomed to his pronunciation; for the manuscript which I am now reading is rather indistinct, and somewhat incorrectly written. Nevertheless, from what I can decipher, my warmest desire is excited to know the rest. To press upon you the idea of printing your lectures would very likely be unpleasant, but I fancy you would not deny me the request to furnish me with a more careful copy; and if you cannot do this, even with the solemn assurance that the manuscript shall never go out of my hands, still this letter will at any rate serve to assure you that I value you and your productions in the highest degree.'

During the first fifteen years of Kant's professorial life his income was small, and his mode of life simple in the highest degree. He occupied a couple of rooms, very plainly furnished, in the house of one or other of his friends

or colleagues, and dined (as is the custom amongst German students) at one of the restaurants of the town. He retired to rest punctually at ten o'clock, and rose equally punctually at five o'clock every morning. His mode of life during the day was equally regular. He lectured so many hours at the University, beginning usually at seven o'clock in the morning, and finishing his last lecture by mid-day. He then gave himself up to thorough relaxation and social intercourse till towards evening, when he returned home and worked steadily till ten o'clock.

Although Kant's mode of life was simple to a degree, yet there was nothing common or vulgar in his habits, dress, or bearing. His residence for some years as tutor in the house of a noble family had habituated him to the refinements of society. He dressed himself with the utmost neatness and care; his manners were easy and courteous; his conversation genial, witty, and sometimes, when excited to effort, even brilliant.

He had a great objection to dining alone, but always required the mid-day meal to be enlivened by a flow of social intercourse of a light and exhilarating character. During the period that he lectured as a *Privat-docent*, he sought this kind of intercourse at the public table; afterwards, when his income increased and he possessed a house of his own, he always invited, without exception, from two to six of his friends to dine with him.

The two most intimate friends he possessed in the earlier part of his professorial life were two Englishmen, named Green and Motherby, the former of whom Kant regarded as a man of such natural power of intelligence that he never committed anything to the press, however small, without reciting it over to Green, to get an unbiassed and unprofessional judgment upon it. One of Kant's old friends and table companions, Herr Jachmann, has given us such an amusing account of the way in which Kant spent his afternoon in company with these English friends, that I am tempted to quote the passage complete:

'In the society of this intelligent, noble-minded, though singular man, Kant found so much food for his mind and heart that he became his daily companion, and spent several

hours every day in his society. Kant went to him every afternoon, and found Green sleeping in his arm-chair; but instead of waking him up, he took another chair and went to sleep too; next came in the bank director Ruffman, and did the same, until at length Motherby stepped into the room at a given time and woke up the company, which then abandoned itself to the most interesting conversation till seven o'clock. The company broke up so punctually at seven that I have often heard those who lived in the street say, "It can't be seven o'clock yet, because Professor Kant has not gone by."'

This friendly intercourse existed during the middle portion of Kant's career, and exercised without doubt a decided influence on his character. Green's death altered Kant's mode of life so greatly, that he never afterwards went into evening society, or even supped at all. It seemed as though this hour, which had been hallowed by the most intimate friendship, ought to be spent to the end of his life in silent solitude as an offering to his departed friend.

V.

Kant began his career as lecturer in 1755. All his efforts to gain a higher position were unavailing, although his reputation was steadily on the increase. The only promotion he received, if such it can be called, was the place of under-librarian, a place which brought him in 62 thalers, or about £9 per annum; but after fifteen years' patient work he was at last rewarded by being made ordinary professor of logic and philosophy at the University. It is time now, therefore, that we should take a glance at his intellectual life during these last fifteen years, and see what progress he was making in the great work of the reformation of the philosophy of his country.

The Wolfian philosophy, which then shared the rule over the speculative intellect of the country with the Middle Age Scholasticism, was based equally with the latter, as we before showed, entirely upon the process of logical analysis. It imagined that the syllogism was a great instrument for the development of philosophical truth, and that human knowledge could shape itself into a complete body of science

by proceeding victoriously from one definition to another, and from one logical conclusion to another, until the whole superstructure was completed. Kant accordingly begins his campaign against the metaphysics of his day by aiming a blow at the value and accuracy of the school logic. In 1762 he published his tractate on the *False Subtlety of the Four Syllogistic Figures*, in which he rejects all the modes of argumentation allowed by the three latter figures as useless and deceptive, and then shows that the form of argumentation set forth in the first figure, though perfectly legitimate and real, is nothing better than an *expanded judgment*. Hence, as all judgment logically considered simply consists in analyzing an idea, and exhibiting the various attributes, one after the other, contained in it, it follows that we can never arrive at *any truth* in the way of a logical conclusion which was not already implicitly contained in the premises. The pretension that we can advance by means of a syllogistic conclusion to any *new* truth is the false subtlety (*falsche Spitzfindigkeit*) which it was Kant's object to refute and condemn.

But now he makes another step in advance. The farther he proceeds, the more dissatisfied he becomes with the Wolfian metaphysics and the commonplace philosophy that pretended to solve all difficulties by the short and easy method of logical analysis. Moreover, his eye is wandering throughout Europe, and noting all the movements of the human intellect which are springing up on all hands. He has been attracted by J. J. Rousseau, and is so captivated by his *Emile* that he sits up the whole night to read it. Altogether, he wants something quite different from the school logic and the Wolfian philosophy. Amongst other places his eye is directed to Scotland, the home of his fathers, and there it meets with the most startling phenomenon of the middle of the last century, namely David Hume.

Hamann, the Wizard of the North, as far back as the year 1759, had directed Kant's attention to Hume; and Herder, who visited Königsberg in 1762, and attended some of Kant's lectures, says that he was then engaged in criticising Hume, as well as Leibnitz, Wolff, Baumgarten,

and Crusius. The outcome of all this is a *second* blow aimed at the reigning dogmatism, which appears in 1763 under the title of an *Attempt to introduce Negative Quantities into Philosophy.* Here he comes fairly to grapple with Hume's great question of causality, and steps out of the logical ground of our knowledge of the succession of events into the real ground of them. 'Logical inference,' he says, 'is simple enough; the conclusion is already in the premises. You have only to analyze the concepts, and draw out the attributes they contain, to form your conclusions with perfect accuracy. But the worst of it is, when you have formed them, they tell you nothing. What I want to know is how we can tell that because *one thing* is here before me, therefore another thing wholly different will follow. Where is the logic that can do this?' Clearly, Kant has abandoned the Wolfian school, and is taking up his abode amongst the abettors of a purely empirical philosophy. He goes from logic to experience, from reasoning to sensation, and then begins to feel that he touches ground and gains new strength.

But how will this rejection of all logical and *à priori* ideas of causality affect the proofs hitherto relied on for the existence of a *causa causarum*, the being of a God? 'Very materially,' answers Kant. The old Cartesian argument, that the idea of a God is the idea of an all-perfect being, and that such a being must exist, because existence is contained in the idea of perfection, Kant shows will not bear examination; it substitutes a real ground for an ideal one, and wholly fails to substantiate anything out of the circle of our own ideas. There is only one possible *à priori* ground of proof for the existence of a God—that, namely, arising from the *possibility* of real existence being hidden behind phenomena generally. If we deny any existence at all, then we in the same breath deny any possibility of reality; but the possibility of existence is a thing we can never deny. Hence, conversely, we may affirm that something does exist, and if something exists, it must exist *necessarily;* it must be simple, absolute, eternal, unchangeable, *i.e.* it must be God. We see here on what a slender thread the proof of the divine existence, metaphysically speaking, rests; and this thread subsequently snaps

asunder with the first stress laid upon it. But does not the failure of the proof of the existence of God carry with it further consequences? Existence, it is shown, cannot be a logical attribute, *i.e.* from the *idea* of a thing we can never conclude that it *really* exists. Existence can only be evidenced in *experience*, and whatever does not exist in experience is merely a logical concept that carries no proof of reality with it. But if this is true of the existence of God, is it not equally true of *everything* that transcends the limits of sense? Are we not then confined as to our knowledge simply to the region of the senses, and are not metaphysical entities delusions? Kant does not absolutely affirm this, but shows from it that the reigning metaphysics require to be *reformed* and placed upon a new and more solid foundation.

The treatises above referred to were published in the year 1762. In 1766 an opportunity occurred of aiming another blow at the metaphysicians, which was too tempting to be neglected. Just at this time the visions of Swedenborg were exciting attention throughout Europe, and Kant received letters from various quarters to inquire what judgment he, as a cool philosophical thinker, was inclined to pass upon them. He therefore published an anonymous reply, entitled, *Dreams of a Ghost-seer, illustrated by Dreams of Metaphysics.* In this reply, he shows that ghost-seeing is a delusion of the senses. When images of the fancy transform themselves into visions, they give rise to delusions of the senses; just so, when dreams of the reason transform themselves into the belief of supersensual realities, then we see analogous delusions on the part of the metaphysicians. For what is ontology but the transforming of the mere *possibility* of supersensual things into a reality? The metaphysician affirms a world of simple immaterial substance, which he can neither hear, see, nor handle, to be the basis of all things; upon this he erects the whole substantive universe, which, in fact, has no reality except in his own brain. In a word, metaphysics are, and must be, *a dream*, so long as they are not based upon fact and experience. 'I know not,' says Kant, 'how certain philosophers of our time can free themselves from this charge,—men who direct

their metaphysical telescopes so diligently to these out-of-the-way regions, and manage to relate wonderful things from them. Least of all do I grudge them any of their discoveries, only I am afraid that a man of good understanding and plain common sense might reply in the same manner as Tycho Brahe's coachman did when his master thought he could drive at night the shortest way by the stars, "Good sir, you may know all about the heavens, but here on earth you are certainly a great fool."'

One would think after this that Kant had at length planted his foot on the principle of those who in our days are usually termed *positivists*, and had thrown in his lot with the philosophy of pure empiricism. But no, this is not his final conclusion. He still thinks that metaphysics form a great and important branch of philosophical research—a much more difficult one, however, than it had hitherto been supposed to be, and much less ambitious in its aims. The great purport of metaphysics, he now sees, is to institute an inquiry into the true boundaries of human knowledge, to determine what it is possible for us to arrive at, and what impossible, to search into the nature and functions of the human faculties (sensation, perception, imagination, reason), and thus to lay a broad foundation for *certitude*, so far as our knowledge can reach, and for *resignation* to unavoidable ignorance in the case of those things which lie beyond the ken of all human understanding. Here, then, at length he comes upon the great problem which it took him many years yet to solve—a problem, the complete solution of which, however, he afterwards presented to the world in the *Critick of Pure Reason.*

VI.

In 1770 Kant reached the summit of his ambition, and became ordinary professor of logic and metaphysics in the University of Königsberg. On assuming this new dignity, he wrote, as is the custom, an inaugural discourse in Latin, 'De mundi sensibilis atque intelligibilis formâ et principiis.' In this discourse he took occasion to bring forward some of the new ideas which were working in his brain respecting the fundamental principles of human knowledge. Kant is

now beginning to struggle in good earnest with the questions here involved. Hitherto his polemic had been negative and destructive; he had been pulling down the supports and buttresses of the reigning dogmatism, but had as yet put nothing in its place. Now he begins the work of reconstruction, *i.e.* to show not so much what we *cannot* reach by our ordinary faculties, as what we *can* legitimately arrive at, and how we are to do it. To know is to judge; but to judge, in the logical sense of the word, is simply to declare identity or contradiction between two ideas already before us. To arrive at any new knowledge, or, in other words, to make a *synthetic* judgment, we must go beyond the mere *analysis* of our concepts, and rely upon some actual experience. But then, what is experience? and what are the elements of which it consists? Experience, it might be replied, is everything that comes to us in a direct sensation. True; but sensations, when viewed alone, are just so many isolated impressions which give us no knowledge whatever. It is only when our sensations are *connected*, when they reveal objects as existing in time and space, when, in a word, they become sense-perceptions, that they form the elements of human knowledge. What, then, *are* time and space? They are not material things, they cannot come to us directly by the senses; neither are they abstract ideas, evolved out of the logical understanding by a process of generalization. It is just here that the first great conclusion of the critical philosophy comes to light. Time and space are *perceptions*, but perceptions of the *inner* sense, which lie at the foundation of all our *outward* perceptions, and furnish the *form* which is necessary to them all. Synthetic judgments, *à priori*, are therefore a possibility, for they spring out of the inner sense; and the application of them is seen in the science of mathematics, which is based wholly upon perceptions of time and space, thus furnishing the matter on which all the applied reasoning subsequently turns. These are some of the problems on which the mind of our philosopher had begun to work, and which seemed to be opening a new door into the hitherto dim regions of metaphysical speculation.

From the time that Kant assumed his due position as

professor, in the year 1770, the idea of inaugurating a new metaphysical philosophy was ever before his mind. Some of the fundamental principles on which it was to be based were already clearly worked out, and he hoped to complete them without much further labour. But as he went forwards, the subject grew upon his hands, difficulties rose up on every side, and it was not till he had laboured upon it for eleven years that the *Critick of Pure Reason* saw the light in its present complete form.

'Already in February 1772,' says Kuno Fischer, 'he writes to Herz: "I am prepared to bring out a *Critick of Pure Reason*, which explains the nature both of theoretical and practical knowledge; and probably in three months I shall publish the first part, which contains the principles of metaphysics, its method and limits, reserving the philosophy of morals for a future publication." The whole work, in both its parts, was designed to embrace what afterwards appeared, one after the other, in three different books—the *Critick of Pure Reason*, *of the Practical Reason*, *and of the Judging Faculty*. At that time Kant thought he might complete the *Critick of Pure Reason* in three months!'

In June of the same year he writes to Herz, 'that he is occupied in elaborating a work on *The Limits of Sense and Reason*, somewhat at large.' This must have meant the two investigations, which were afterwards contained in the *Elementarlehre* of the *Critick of Pure Reason*,—namely, the transcendental, æsthetic, and logic. In the meantime it dawns upon him that the principles of human knowledge must not only be well grounded, but that its *limits* must be well defined; and that to solve fully the question, there must be added a discipline, a canon, an architectonic of the pure reason, which he afterwards termed the *Methodenlehre*. 'With this work,' writes Kant in November 1776, 'I cannot now hope to be ready by Easter, but must spend part of the summer upon it.' He complains already of frequently-interrupted health.

Respecting the system of his new philosophy, that is, the general idea of it, Kant is already clear; but before any systematic completion can be thought of, the foundation

must be laid in a thorough critical investigation. This *Critick* presents peculiar difficulties, more especially as to the form in which it should be expressed, which ought to make it convincing and comprehensible for every thinking person.

In August 1777 Kant writes that this criticism lies in the way of his more systematic labours like a stone, which he is only occupied in rolling away, and he hopes to have finished with it in the course of the winter. The work goes on. Still, in the summer of the following year, it is not yet complete. 'The size of the book,' he says, 'is quite moderate; all the difficulty lies in the matter.'

'The causes of the delay,' writes Kant, 'in this year (1778) you must attribute to the nature of the matter, and the whole purport I have in view.' In a letter dated August 1778, he speaks of his work as a handbook of metaphysics, on which he is constantly labouring. Even his lectures on metaphysics have assumed this year quite another form.

At length, on the 1st of May 1781, Kant writes: 'This Easter a book of mine will come out under the title of *Critick of Pure Reason.* It is being printed for Hartnock in Halle. This book contains the result of all my various investigations, which commenced with the ideas presented in the inaugural discourse, "De Mundi sensibilis," etc.'

We are thus brought to the great era in Kant's life, and, we may also say, to the great era in the history of modern philosophy—the first appearance of the *Critick of Pure Reason.*

VII.

Kant's whole idea of a critical research into the entire cognitive faculty was certainly new. Descartes and his school had inquired into the process of human knowledge, and had centred it in the human *reason*, but they had never told us what reason is. Locke and his school had instituted the same inquiry, and had built up the whole fabric upon experience; but they had never inquired of what elements experience itself is made up. The critique of Kant was, in fact, a new department of philosophical in-

quiry. Leaving all ontological questions in abeyance, he took the fact of human experience itself, psychologically considered, as the subject-matter of his research, and proposed to find out if there is anything in that fact which could contravene the sweeping conclusions of Hume's scepticism.

Hume had come to the conclusion that all human knowledge consists simply in the experience or impression of the moment; that there are no *à priori* ideas, no *à priori* judgments; that there is nothing whatever within the range of human truth (now accepted as such) which we are capable of saying must have been always truth. Kant's first question, then, was, 'Is this really so? Are there no judgments whatever arising out of our experience which are fixed and unalterable?' Are there no synthetic judgments *à priori?* Kant saw clearly that the department of human knowledge in which this question could be most readily tested was that of *mathematics*. The knowledge we are concerned with in mathematics springs directly out of experience. It deals with lines, and angles, and figures, etc., in their relative positions and dimensions—all objects of sense, originally speaking; and yet, though springing distinctly out of our sense perceptions, it conducts us to conclusions or judgments which we are constrained to recognise as so sure and certain, that no amount of violence done to our reason could lead us to conceive that those conclusions ever had been, or ever could be, different from what they really are. Here, therefore, we find that there *are* such things as absolute judgments, and that, too, in connection with knowledge springing directly out of our *experience*.

But how is this possible? How is it that mathematical truths are invested with this absolute and unchangeable certitude? In investigating this question, Kant was led to trace all mathematical ideas up to the two elements of *time* and *space*. '*Succession* and *extension*, these,' he said, 'are the real materials which lie at the basis of all numerical and geometric calculations. Without them we can have no mathematical ideas whatever; without them we can gain no conceptions of the outer world; without them we can

frame no experience, and possess no definite sense perceptions. Here, then, are two elements of human knowledge which do not arise from outward *experience*, because outward experience is impossible without them; which do not spring from the senses, since all perception presupposes them; which, in a word, are *à priori* forms of all our sensations, and spring necessarily out of the very nature and structure of the human mind. The question, therefore, as to how synthetic judgments, *à priori*, are possible, is answered by the fact now evolved from the above analysis, that time and space are primary forms or conditions of all human perception, and that their relations must be valid, *subjectively*, so long as the human mind remains as it is.'

This was Kant's *first* and, we may add, Kant's *great* discovery in mental science, inasmuch as it led to all the rest. By a most consecutive course of reasoning, he succeeded in decomposing the fact of human *experience*, showing that *within that fact* there lies concealed an *à priori* element, out of which truths are evolved that possess an absolute subjective certitude. And not only this, but he discovered exactly what this *à priori* element is. He detected in the two notions of time and space the preconditions of all our possible perceptions, and showed that a science which deals simply with the time and space relations (such as mathematics) may lay claim to the most absolute certitude. Having thus succeeded in decomposing perception, Kant proceeded in the same way to decompose the powers of the *understanding*.

To rightly appreciate his point of view, it will be serviceable to compare it with the teaching of the other philosophical thinkers of the time. The dogmatic system which then prevailed in Germany appealed to enlightened human understanding (*aufgeklärter Menschen-Verstand*) as the basis of all human knowledge. Trusting to this as the highest guide, it laid down at the threshold of all inquiry carefully-framed definitions of the terms involved,—mind, matter, cause, effect, nature, God, right, wrong, etc.,—and then proceeded to draw conclusions from them by means of a continued logical analysis. Kant in his earlier treatises showed abundantly how utterly futile and untenable all this pro-

cedure had been, and ever must be. He showed that we can never pass, by any mental process, from the ideas thus laid down to the objective reality, and that all knowledge which is not based on actual experience is vain and illusory. So far Kant seems to agree wholly with the sensational school, and to join his forces to those of Locke, Hume, and the later French sensationalists, as a purely experimental philosopher. This is one side of the medal, now let us look at the other. As soon as the sensationalist comes with his pretensions to certain knowledge, based on *experience*, Kant meets him with the inquiry, 'What is experience?' If he reply, 'Experience is that which comes to us directly by the *senses*,' then Kant rejoins that all which can come to us directly by the senses, is a disconnected series of bare subjective feeling, without unity, without connection of parts, without synthesis of any kind. Taken alone, this could only present a confused array of passing phenomena, devoid of all shape, order, or meaning.

To possess experience of such a nature as to produce knowledge, we must see objects as existing in space without us, and as existing in time or succession around us. Nor is this all. Objects must be distinguished as possessing magnitude or quantity; they must be distinguished as genera and species—that is, as possessing *quality*; they must have certain relations to each other—relations of cause and effect, of action and reaction; and then they must all be gathered together in one great synthesis as belonging to the phenomena of my own perceiving and intelligent mind. Now, all these determinations, without which no knowledge can exist, do not come to us by the *senses*; they come through the understanding. Consequently, pure reason is absolutely necessary in order to create or form experience.

Kant's point of view now becomes quite clear to us, as rising to a point of higher unity above the two rival schools just mentioned—those of idealism and realism. To the idealist Kant says, 'All your innate ideas are null and void; they can never bridge over the gulf which separates thought from being, the ideal from the real.' To the sensationalist he says, 'All your subjective sense perceptions are *blind;* they can never furnish you with a single case of real know-

ledge.' Sensation is necessary to furnish the primary material; but reason is necessary to form out of it a body of experience, to which we can attach the name of *knowledge.* By means of the criticism now instituted, Kant claims to have discovered the true function of each of the faculties. We have seen how sensation becomes perception by means of the inward intuition of time and space; and we have seen of what elements experience is constructed, by the application of the forms of thought given in the categories of quantity, quality, relation, and modality.

Only one point remains to be cleared up—namely, How it is that the human mind, in its desire for complete knowledge, holds fast to its belief in the soul, in the universe, and in God, notwithstanding they all lie within the supersensuous world, and are therefore beyond the reach of all human evidence? To clear up this point, it should be remembered that Kant attributes to the human mind three main cognitive faculties—perception, understanding, and reason. Each of these faculties contains principles or forms of thought, by the application of which to the materials given in the senses, knowledge in the scientific sense is produced. These three faculties stand in such relation that the products of each one becomes the *object* on which the faculty immediately above it has to work. Thus, perception has two inner forms—time and space; and the combination of these with our primary sensations gives rise to a clear perception of individual objects as they appear to us in the external world. Then, secondly, the understanding has *its* forms or categories—quantity, quality, relation, modality; and our perceptions, when moulded and intellectualized by these concepts, are wrought up into a connected and intelligible body of experimental knowledge. Thus we come to comprehend nature, to grasp the external world in all its proportions and relations. This experimental knowledge, the product of the understanding, now in its turn becomes the object on which the *reason* has to exercise its powers, so as to combine the knowledge gained by the understanding into system and unity. The sphere of the understanding comprehends three regions of phenomena:—1st. The phenomena of the inner conscious-

ness; 2d. Those of the outer world; and 3d. Those of all possible existence. In each of these regions the human reason seeks after completeness and unity, and places before itself some ideal in which they are summed up. The ideal in which the phenomena of the inner consciousness are summed up is the *soul*; that in which all outward phenomena are summed up is the *universe*; that in which all possible existence is summed up is *God*. These three ideals we can never reach as objects of actual and positive knowledge; they are simply regulative principles, which guide the reason in its search after the highest truth. Thus the world of ontology is wholly illusory and unattainable; it may stand before us, if we will, as an object of *faith*, never as an object of *knowledge*, grounded as it is simply in *ideas*, and not in any actual experience.

This, then, was the conclusion to which the whole Kantian criticism led. For the first year or two after its appearance, it excited comparatively little attention. The notices which appeared in the journals exhibited far more the incapacity of the writers to grasp the subject than they did the defects of the work itself. Some of the critics, in particular Garve, set it down as a *réchauffé* of Berkeley's idealism. All this misunderstanding led Kant to consider whether he could make his ideas more plain and popular; and in 1782 appeared his *Prolegomena to all Future Metaphysics*, in which he gave a restatement of his principles with a somewhat stronger leaning to the realistic side. In the meantime, some of his friends and admirers began to take action in his defence, and present the principles advocated in the *Critick* in a more popular form. From this time, accordingly, Kant ceased to write in his own defence, and proceeded steadily onwards to the completion of his system, in the direction of morals, æsthetics, and philosophy of religion.

The two works in which Kant's moral system is contained, appeared respectively in 1785 and 1787. The first was entitled *Foundations for a Metaphysic of Morals*; the other, *Critick of Practical Reason*. There is a striking analogy between Kant's treatment of the pure and the practical reason. In the former case he steered his course between

the rocks of idealism on the one side, and the shallows of sensationalism on the other. In the latter case he follows fundamentally the same course. The Wolfian school started with the definition of moral perfection, and from this derived, by a continued logical analysis, a complete system of ethics. On the other hand, the English school of moralists planted its foot here, as in the case of mental philosophy, upon direct experience—that, namely, of the moral sense. Kant, as before, takes his start from the English point of view—from the phenomena of moral sentiment—as that which alone furnishes the *material* for all moral ideas. But just as before in the *Critick of Pure Reason*, so he now also shows that we must go beyond mere experience or sentiment to find the firm foundations of a moral system, and attempt to discover some fixed laws of the practical reason, occupying in morals an analogous place with the categories in metaphysics. Mere moral sentiment can lead to no uniformity of moral action; it varies in character, in intensity, in direction. Only when we discover that reason has fixed laws for *practice* in the same way as it has fixed laws for *intelligence*, can we gain a firm basis for moral action. By a beautiful process of Socratic reasoning, Kant deduces the idea of *freedom* as the condition of all moral life, of *personality* in connection with the phenomena of respect and reverence, of *duty*, stripped of all notions of self-seeking or self-preservation, and arrives at length at the highest law of human action—the Categoric Imperative: 'Act so that the maxims of your will may always hold good as a universal law of action for all men.' In this way human action is released from all subordinate and personal motives, and placed under a practical law of reason which is universal, necessary, and unalterable.

Kant thus proposes to place morals upon a basis of the highest certitude. Instead of drawing his conclusions from mere *ideas*,—the ideas of right, duty, perfection, etc.,—he starts from the world of reality, the world of human feeling and human action. Then, having found a basis in the real, he proceeds to discover the universal law by which human actions can be guided to the highest good with absolute certainty. And not only this, but by following

out the indications of moral law, he shows that we are led even beyond the range of reason itself in the speculative sense. Thus freedom, which always remains a mystery to the speculative reason, becomes an obvious postulate of the practical reason. Another similar postulate is the fact of the immortality of the soul, by means of which alone the great end of our being—the highest good—is attainable. So also, in fine, the practical reason involves the existence of a Supreme Being and Moral Governor; for how can a complete system of moral law and government exist without an original Lawgiver and a Supreme Governor?

Kant was fifty-seven years of age when the *Critick of Pure Reason* was published, and sixty-three when the *Critick of Practical Reason* appeared. This period accordingly represents the culminating point of his powers as a thinker and writer. Numerous smaller treatises on widely different subjects flowed from his pen during this period, of which we cannot now take account. The *Critick of the Judgment* (*Urtheilskraft*) appeared in 1790, and may be regarded as the completion of the whole system of his philosophical ideas. This work was devoted to the elucidation of the principles of æsthetics, as based upon the teleological phenomena of nature.

And this brings us to the point where we are naturally led to refer to Kant's religious ideas, as shown in his treatise, entitled, *Religion within the Limits of Reason only*. This treatise is an attempt to give a complete moral interpretation of Christian theology. It discusses, first of all, the radical evil existing in human nature, and places in opposition to it the tendency to good which is shown in the natural conscience of man, and the homage he renders to right over wrong. The moral progress of mankind towards the highest good consists in a constant struggle of the good principle to overcome the evil. These principles of good and evil lie so deep down in the consciousness, and their origin and nature are so little comprehended by us, that the efforts of the one are attributed to a direct divine influence—to the grace of God, and the efforts of the other are supposed to be prompted by the power of the evil spirit—the devil. Christ is the personification of

humanity as completely victorious over evil and attaining the ideal of moral perfection; and the idea of God becoming man, signifies the descent of the principle of good into human nature, in order to overcome the evil principle personified as the Prince of the World. Salvation is the full and inward reception of the good, and the complete renunciation of the evil, and can only consist in a complete moral transformation from the power of evil to the love of truth in purpose and action. But how is this transformation to be effected? Kant replies, 'By the constitution of a society based upon the principles of virtue, and adapted to aid the individual in carrying them out; and this is called the kingdom of God on earth.' But such a kingdom or church of the living God cannot, in the present state of society, be founded upon abstract moral maxims which fail to excite the sympathy and enthusiasm of the masses of mankind. It must be founded on a historical basis, and enforce the practice of virtue by a *faith* in the historical facts which embody all these moral principles in the highest degree. A blind subserviency to this faith is called orthodoxy. In proportion as mankind advances to a higher development of reason and moral action, mere historical faith becomes less needful, and faith in *moral truth itself* will take its place. The substitution of the latter for the former is the approach of the kingdom of God, in which the service of God will be simply the service of a holy life, stripped of all the merely temporary expedients of the church, the priesthood, and the altar.

It happened, unfortunately for Kant, that the court of Berlin was governed in religious matters at this particular juncture by a clique of religious mystics or enthusiasts, whose policy was to enthrone strict orthodoxy in the churches and curb all free inquiry at the Universities. With many others, Kant received a governmental censure in consequence of his views on *Religion within the Limits of Reason*, a strict injunction to withhold all teaching of that kind for the future, and an order to confine himself to scientific subjects only. As a loyal subject of the Prussian throne, from which he held his appointment in the National University, Kant bound himself to follow the injunction as

long as it was His Majesty's pleasure to maintain it. Two years after, however, the king died, and liberty of speech was restored. Kant was now in his seventy-sixth year, and the last effort of his pen was, not to resent the attack made upon his intellectual freedom, but to show the relation which the different Faculties at the Universities should hold to each other, and to propose a *modus vivendi* by means of which dogmatic theology and critical philosophy might flourish side by side in harmony and peace, and the conflict of the Faculties cease.

This was written in the year 1798. The six years which Kant lived after that were marked by increasing weakness both of his mental and bodily powers. Wasianski, the closest and most intimate friend he had during this period of his life, has given us, in a little book of two hundred pages, a vivid description of Kant in his later years; and it was mainly upon this that Cousin grounded his little tractate, entitled, *Kant dans les derniers Années de sa vie*. The picture there drawn is interesting, but sad; and in place of giving any description here of the wreck of a great intellectual nature, it seems better to refer the reader to the above-mentioned sources, the latter of which, at any rate, is easily accessible. Kant died in February 1804, having lived long enough to see his philosophy pass like an electric current of thought throughout the whole length and breadth of Germany, and excite the curiosity, more or less, of every country in Europe.

To understand the secret of this widespread influence and popularity, there are various circumstances to be taken into account. First of all, we must remember that the old Scholastic philosophy was still entrenched in most of the Universities of Europe, and that the Wolfian reform was for the most part accepted throughout Germany by the more advanced teachers of the age. Starting from these principles, the illuminati of that period were gaining an easy victory over all the speculative difficulties which beset the path of human knowledge. All the moral sciences—ontology, ethics, psychology, philosophy of religion, etc.—were assuming a strangely rounded form, and the work of metaphysical research seemed almost complete. But here

appeared on the scene a robust intellect that marred all these prospects. Kant (*der Alles zermalmende*) not only attacked the Aristotelian moods and figures, but pursued the easy analytic method of Wolff into all its numerous strongholds, and routed all its pretensions to the discovery of certitude or truth. Ontology was bodily overthrown, psychology remodelled, ethics raised upon a pedestal far above the imagination of the Wolfian dogmatists, while the philosophy of religion threatened to strangle the effete orthodoxy of the Lutheran Church by planting Christianity upon a higher moral basis than its own. In a word, all the accepted landmarks of evidence were removed, and placed in wholly different positions than those they had occupied before. It might have been supposed that Kant's polemic against the established principles of philosophy would have raised a barrier against the promulgation of his doctrines; but, as is generally the case, the age had been tacitly prepared for them. The idealism of Berkeley, the sensationalism of Hume, the influence of Rousseau and Voltaire, the whole bent of the eighteenth century, had brought the mind of Europe into a state of ferment which was sure to prepare a welcome for any new system of ideas that promised to satisfy the craving for change. Added to this, the conclusions to which the Kantian philosophy led were such as were perfectly sure to attract the better portion of the liberal thinkers of the age. Those thinkers had become already impatient of the shallow dogmatism of the Wolfian school. The influence of Locke, Newton, Hume, had turned their attention to the claims of *experience* as a basis of truth hitherto too much neglected; and the degradation of morals which so largely prevailed, led them to hail the appearance of a philosophy which placed them on the very highest pinnacle of human reverence, while the free-thinking spirit of the century naturally disposed it for an interpretation of Christianity which held all its truths within the limits of reason only.

But, independently of the tendencies of any particular age, there was that in the whole process of Kant's criticism which indicated a real and permanent advance in the speculative thinking of Europe. Like those of all great

reformers, the writings of Kant formed not a philosophy, but a method of philosophizing. Just as Bacon propounded a *Novum Organum*, just as Descartes propounded his ideas in a *Disquisitio de Methodo*, just as Locke sought to fix the processes and limits of the human understanding, so also Kant in his *Critick* aimed simply at defining how and how far human knowledge is possible. Without either admitting or rejecting the validity of idealism on the one side, or realism on the other, he sought to find out what permanent element of truth there was in both, and how the *à priori* and *à posteriori* principles were both combined in the every act of knowing. We have already seen how he solved the problem. We have seen how he took the matter of our knowledge from experience, and the form from the categories lying originally in the constitution of the human mind; how in this way he came to the conclusion that matter in its absolute essence, cause in any form up to the *causa causarum*, and the soul, apart from its phenomena, are wholly unknowable; how he laid a separate foundation for moral truth in the actual facts of human experience, and showed the truth of religion within the bounds of reason, basing our belief in God and immortality upon the necessary postulates of our moral nature. That Kant succeeded in giving a more deep and penetrating insight into the whole theory of human knowledge than had ever been reached before, is abundantly evident; nor can his services in this respect be ever dispensed with in any future scheme of metaphysics. But whether or not he landed the moral sciences upon any firm and lasting basis, is a question which history *itself* answers in the negative. Reinhold, one of Kant's most acute followers and expounders, soon pointed out the fatal dualism in his system, which attributes independent and unconnected authority to the powers of perception and understanding, and was the first to show that these two supposed primary sources of human knowledge must be in the end referred to one great fundamental faculty of inward representation (*Vorstellungs-Vermögen*). Jacobi, in the meantime, detected a like dualism between the speculative and the moral half of the Kantian criticism, and pointed out how unsatisfactory it must ever be to the

spirit of philosophical research that the speculative reason should arrive at one set of conclusions, and the practical reason at another. So, after all the gigantic intellectual efforts put forth by the Giant of the North, and all the enthusiastic admiration which he gained from a host of ardent admirers, the conviction returns to us that we see in him only one of the great landmarks of human thought (like Plato, Descartes, and Locke before him), who hand on the torch of speculation from age to age, increasing at each step the light shed upon human truth, but only preparing the way for a still higher standpoint and a broader generalization in ages yet to come.

CHAPTER IV.

German Philosophy in the Nineteenth Century.

KANT died in 1804. The nineteenth century was ushered in, as concerns the philosophical atmosphere of Germany, by all that ferment of thought which arose out of the dissemination of his doctrines. Twenty years had passed since the *Critick of Pure Reason* first appeared, and in that twenty years it had come to be either maintained or decried, commented on and expounded in every University in the country. The prevailing sentiment it awoke, when once fully understood, was undoubtedly that of admiration, but not wholly so. From various quarters the sounds of discontent arose, more especially from men of a less hardy philosophical temperament, who could not sympathize with the rigid, dialectical manner in which Kant treated all the great questions of human interest. Herder, for example, with his half-philosophic, half-historical views of human truth, evinced a deep dissatisfaction at the way in which Kant had cut all tradition from under our feet, and made, as it were, a divinity of the pure and practical reason. He even went so far as to designate the enthusiasm which had arisen for the critical philosophy as 'a St. Vitus's dance, an ignorant disgust for all real knowledge, and an unbearable contempt for all the great and good men who had lived before us.'

Others, again, especially Jacobi, though in many points agreeing with Kant and awarding him the meed of sincere admiration, could not accept the contradictions in which he taught that reason becomes involved when seeking to verify its knowledge of supersensual things. Starting from

the fundamental fact of perception (much in the style of Reid), Jacobi strove to maintain that the human mind possesses a power of *intuition*, by means of which it is brought directly into contact with fundamental realities; which realities it can sufficiently verify through the *immediacy* of its knowledge without requiring either logical proof or moral postulates, and consequently without needing at all to implicate itself in any of the Kantian paralogisms.

This power of immediate perception, of spiritual intuition, of direct insight into the regions of the true, the beautiful, and the good, he carried with him as a fundamental principle all through his long career of literary and philosophical activity, and thus introduced a genial *faith element* amongst the hard logical constructions of the age, which exerted a marked effect upon the subsequent course of German speculation. That whole analogous stream of thought which pervaded the writings of Fries, Bouterweck, Calker, and became introduced into the region of theology by the teaching of De Wette, owed its origin mainly to the influence which Jacobi had exerted upon the philosophical tendencies of his age. In every future history of European speculation, the faith philosophy (*Glaubens-philosophie*), as it is termed, will hold a not unimportant place as an antidote, well timed and highly needed, to counteract the excessive logical subtlety which Kantism introduced.

We have already shown, in a former monogram, that the philosophy of Kant contained in it two irreconcilable elements, standing erect on two separate pillars—that of experience on the one side, that of pure reason on the other. Even Kant himself, in his various writings, failed to hold the relative claims of realism and idealism with an even hand; much less could it be expected that so delicate a balance should be maintained throughout the school to which his philosophy gave birth. We find, accordingly, that the more recent metaphysical and moral speculation of Germany, taking its starting-point almost exclusively from Kant, has run in two main channels, according as the realistic or idealistic element has obtained the predominance. Its history may be thus tabulated:—

KANT.

A.
IDEALISTIC SIDE.
Fichte.

Fr. Schlegel, Novalis, and the Romantic School.

Schelling.
Natur-philosophie, Mysticism.

Hegel.

Right.	*Middle.*	*Left.*
Göschel.	Rosenkranz.	Strauss.
Gabler.	Schaller.	Feuerbach.
		Ruge.

Materialism.
Vogt.
Moleschott.

B.
REALISTIC SIDE.
Herbart and the School of Psychologists.

C.
Attempts to mediate between Idealism and Realism.

Schopenhauer.
Hartmann.
Fechner.
Lotze.
Fichte the younger.
Ulrici, and the
Zeitschrift für Philosophie.

A.—IDEALISTIC SIDE.

Amongst the numerous disciples of Kant there was one who showed himself possessed of the modern spirit of criticism even to a more intense degree than the master himself—I mean John Gottlieb Fichte, a man of whom the world has heard so much, but whom it has comprehended so little. Fichte was from the first a whole-hearted disciple of Kant; he admired him enthusiastically, regarded his method as the great discovery of the age, accepted the contradictions in which he had shown the speculative reason to be involved as accurate deductions, but thought that they would vanish if the principles involved in them were boldly carried out to their legitimate consequences. Kant himself had intimated that there might possibly be some higher principles in which those contradictions would disappear, and in which the results of the pure and the practical reason would perfectly coincide. Fichte was thus, in fact, only carrying out Kant's own suggestion when he attempted to supply this deficiency, to clear up the last problem that was left unresolved, and to give to the critical

philosophy one undivided basis from which the whole of its conclusions would legitimately flow. Kant, as we have seen, had put the practical or ethical element decidedly *above* the purely speculative or rational; this, also, Fichte accepted as a great truth. The self or the *will* he regarded as the truest and intensest reality, the type of all being, the source of all activity; and it was from this, as the primary germ of existence, that he proposed to take his start, in this that he conceived he had found the true solution of Kant's contradictions, and on this, as the unit idea, that he now proceeded to build up his whole system of scientific truth. In the Kantian philosophy there was an unknown *x*, termed *substance*, *noumenon*, or *being per se*, which the speculative reason could not verify, but in which the practical reason was constrained to *believe*. Fichte cut the knot of the whole difficulty by transferring this unknown quantity *into the subject itself*, by showing that it was a creation of the mind's own productive power, and not a reality standing in antagonism to it.

In this procedure there was nothing surely so very extravagant as some persons have imagined. Almost all philosophical thinkers had stopped short at the same difficulty. The most practical of them, those who placed implicit confidence in the senses, yet had again and again affirmed that the senses told them of phenomena only, and could affirm nothing about the substratum in which they exist. And as to the phenomena themselves, where would they be if the percipient mind were not present in the creation? Where would be the hues of nature without the perceiving eye? where the harmonies of the world without the hearing ear? What, in short, would the universe itself be, if *the soul* were not there as an element in its whole phenomenal existence?

In taking, then, the mind, or '*the me*,' as the basis of all existence, Fichte seemed only to be laying the topstone upon the whole Kantian system. Added to this, he was putting the grandeur of moral truth and moral action in a still more striking light. Freedom, he showed, was the basis of all *being;* by action man created his own universe around him, so that the very forms of the material world

became but the 'sensized materials of human duty,' and moral *law* the law of all existence. The state was but freedom organized, the reconstruction into one united whole of all those personalities which had remained asunder in their individual capacity; the scholar was the highest and truest man, the educator of his race, the priest of truth; the aim and goal of all social life and civil society was the free development of humanity up to perfect reason on the side of thought and perfect right on the side of action. Under these influences, all the old traditionary principles of kingcraft and priestcraft necessarily vanish away. Religion and morality become identical; religious faith is perfect trust in the moral order of the universe: that moral order itself is God. The idea of God as substance, a being apart from and out of the world, became on these principles an impossibility; nay, every attempt to conceive such a being, declared Fichte, could only prove AN IDOL. God exists simply in and through the world: He is not a person, but an external principle of moral action; and the complete subjection of the will to this moral ideal is the highest and only true piety. Such a state, when once attained, is complete blessedness—a blessedness in which heaven itself can alone consist.

Such were the main conclusions to which Fichte arrived in the first period of his philosophical career. The mode in which he worked them out *scientifically* we need not here exhibit. It will be sufficient simply to indicate this one explanation, that he started, as Kant did, from *the proposition* as the absolute form of all truth ($a = a$), and from this as the foundation built up a complete formal system, which, he conceived, stood upon a most indisputable basis, and marched onwards to its completion by the most rigid logical consecution.

These conclusions of Fichte certainly *look* atheistic enough in their plain and obvious meaning; and yet Fichte, though hurried on by the ardour of speculation into such results, was very far from being what we usually term an atheist in his heart. The proof of this was soon to be tested by an event which made an epoch in Fichte's life, and operated most powerfully upon the whole course of his

subsequent speculations. An article which he had inserted in a philosophical journal, 'On the ground of our belief in a divine government,' drew down upon him, from some of the officials of the Saxon government, the direct charge of atheism, and ended in his virtual dismissal from his professorial chair at Jena. This event forms a deeply interesting point, not merely in Fichte's life, but in the historical development of our modern conceptions of science, religion, and humanity, of our whole philosophy of the universe.

The old 'Weltanschauung' and the new came here into direct collision, and all the happy dreams in which Fichte had indulged of a regenerated state of society, where reason and right should reign supreme,—where the scholar would be the priest, and all the rest of mankind become willing devotees to his great mission,—vanished away before the prejudices of a few ignorant Bureaucrats, who not only held their own opinions very tenaciously, but had the power, in a certain degree, to enforce them.

The contrast was certainly sufficiently striking. Here on the one side were a few old-fashioned officials,—men who had personally very loose notions of morality, both in theory and in practice; men who accepted as a tradition the verbal belief in a God and a state Christianity, but who, beyond the state side of the question, had little care either for the one or for the other. On the other side stood Fichte, a man of intense intellectual energy, of stern and stoical moral principles, of a disposition to sacrifice everything he possessed for truth, and who, though extreme in his speculative views, yet retained a deep heart reverence for the Bible as the grandest of moral disquisitions, and even read it daily, accompanied with offerings of pious devotion, in the bosom of his family. No wonder that a charge of atheism from *these* men roused the indignation of his soul down to its very centre; nor can we pass a very severe judgment upon him, when we read the burning pages in which he vindicated himself before the eyes of the world, and hurled back the charge of *practical* atheism upon his accusers.

What is that God (this is the spirit of his reply) for which you appear so zealous? *Words*, nothing but *words*. Your

forefathers have put together a set of phrases, and you have learnt to chatter the same phrases after them. You imagine that in using these forms of speech, and professing your assent to these propositions, you are *believing in God* and paying homage to truth. Know, O men, that you are denying God and desecrating truth. All your thought, in holding these propositions, is to stand well with the world; or if perchance there be some little feeling left that there really is a Being who takes notice of your vain repetitions, it is only with a view of getting all the enjoyment you can out of His favour that you propitiate Him with your vows. If it were otherwise, you would have a zeal for *truth* and for *right!* If you really had any belief in God in your *hearts*, you would become like Him, and act as the Supreme Father, the source of all good, acts towards His creatures. Your deity is in fact an *idol;* and that idol is made to be the guardian of your own selfishness. What is *my* atheism compared with this? I do not pretend to hold a truth, when in fact I am only repeating a phrase. I only acknowledge as truth what I actually realize and possess within me, what forms part of my own real life, what mixes itself up in intimate relation with my own personality, and evinces itself by moral energy and practical work for humanity at large. I reverence *all* that I find everywhere of good and great, and bow myself in deep adoration before the moral order of the world; to assert this I am ready to labour, or if need be to *die*, for death in the cause of right is life to the world after me. (See the *Appellation an das Publicum gegen die Anklage des Atheismus.*) From the whole spirit of this defence, it will be evident that Fichte was only *speculatively* atheistical in his principles; he retained all that inward sense of an infinite power, an infinite purity, and an infinite goodness which forms the subjective basis of every man's true religious life; only his philosophic theory taught him to deduce everything from the phenomena of his own self-consciousness, and he had not yet found any formal method of translating these inward experiences into the language of objective truth.

The charge of atheism, however, and the necessity in which it involved him of appealing to the public in self-

defence, worked a considerable modification in Fichte's views. For what was he, in fact, admitting, by the very appeal he made to public opinion as the judge and umpire in the strife between the state theology on the one hand, and modern science on the other? He was appealing clearly to a kind of *communis sensus*, a universal moral consciousness, which knew nothing about '*the me*' and the '*not me*,' which possessed none of the privileges of learning, and had nothing to do with the 'nature of the scholar.' Hence, driven by the stringent experiences of human life, he began to retreat step by step from his purely individual point of view. The *subjective Ego* on which he had at first built his whole system of science, glided almost imperceptibly into a kind of *absolute Ego*,—the ideal of all human personality combined, of which the individual is but one imperfect manifestation. The standpoint of *absolute knowledge*, as expressed by the principle of subjective idealism ($a = a$), passed over insensibly into a *fundamental feeling*, lying deep in the universal bosom of humanity; and this fundamental feeling pointed to a law in the universe, separate from, and lying far above, the phenomena of our individual subjective life. What comes to view in the individual consciousness, he now saw to be but the image of a still higher reality, the streaming forth of the universal life, the infinite thought, the eternal mind, which fills everything with its presence, which gives form and reality to all nature, and an infinite purpose to humanity in its historical development. The way to a blessed life is to rise upwards to the full consciousness of, and union with, the divine idea; not that we can in this way create for ourselves a Deity, but that, by self-abnegation, we can raise ourselves to a perfect harmony with the divine, to a life in God. Thus, then, the purely moral point of view with which Fichte originally started, ends at last in the development of a sublime religious mysticism.

To this point Fichte had arrived when the struggle for German freedom broke out. Carried away by the most ardent patriotism, he now threw aside his dry abstractions, and abandoned the study of syllogistic formulas for the study of human history and the laws of human progress.

The light of the living individual broke in upon the conceptions of mere abstract thinking, the element of history entered into the substance of his philosophic speculation, and the very spirit which had so long dreamed of forcing the human reason into the admission of one rigid system of science now lived to know that nature is stronger than system, that the spirit of humanity is more real than speculation, and that the thought of the age which, when it will, can throw up all kinds of abstract systems to the light of day, can also just as easily, when they have done their work, dismiss them into the regions of darkness and oblivion.

The philosophy of Fichte was undoubtedly one-sided; and though he himself earnestly attempted to correct the extreme subjective conclusions to which it led, he never succeeded, more than in a very partial degree, in doing so. Some of his early disciples, however, with far less moral force than himself, did not hesitate to carry out the principle of *the absolute supremacy of the will* to its culminating point, adapting the speculative principles of Fichte on this head at once to life and practice. This was more especially the case with Friedrich Schlegel and a few of the kindred minds with which he stood in intimate connection. Schlegel, having accepted the absoluteness of '*the me*' in theory, considered himself only consistent in so interpreting it as to deduce a corresponding idea of human life—one, that is, in which the will, breaking through all bounds of law and order, should assert for itself the most entire right of arbitrary caprice. Work he accordingly denounced as slavery, and declared the will to be free only when it gave itself up to a *divine idleness*, sporting at pleasure with all existence, vegetating in lawless defiance of all established ideas of labour or duty, and giving itself up to the full bent of its own inward impulses. This idea of life is shadowed forth in the *Lucinde*, which aimed more especially at breaking down the restraints of marriage, in favour of the natural attraction of kindred minds to each other. That the subjective principle, driven to this excess, could maintain its ground against the better instincts of humanity, was plainly impossible; the *irony* with which it pursued all

proprieties of human life recoiled upon itself, the whole system passed into mere nihilism and disappeared.

This precise point, however, in which the extreme subjective principle evaporated and passed away, is chiefly interesting as being the cradle of a new phase of thought, and a new view of human life, which has since played a highly important part in the literary history of Germany,—I mean *the modern romantic school.* The romantic school of the nineteenth century was the first powerful reaction which organized itself against the modern philosophic ideas on which we have been discoursing, springing, as most reactions do, out of the excesses into which the reigning system had been driven. Minds weary with speculation, and urged on, step by step, to the verge of nihilism, are naturally unable to turn round and quietly retrace their path; they look over the chasm to the brink of which they have arrived, and starting back with a convulsive horror of all speculation, take refuge, for the most part, in the first positive and authoritative system of connected ideas which may present itself to their view. So it was with Fr. Schlegel, so with Novalis and others, in whom the extreme subjective principle thus operated its own cure. Novalis died too young for it ever to be apparent what ultimate direction his ideas would have taken; but Schlegel, after having vainly tried to clip the wings of his speculative fancy by a rigid application of the laws of logic, sank back into the most misty Middle Age view of life, and then tried to find rest for his spirit in the bosom of the Catholic church.

The romantic school, once commenced, soon began to extend itself over a very considerable surface of literary activity. Tieck threw around it the charm of his exquisite fiction; and even Schiller, though imbued with a large infusion of the old classic spirit, and something of the modern also, devoted a considerable portion of his genius to the development of the romantic element. Those who, like Schlegel, had practically advocated a reckless moral licence, or who, like Count Stolberg and Leo the historian, had lived through the varied phases of actual licentiousness, having lost, in this way, all internal moral manhood, threw themselves, not unnaturally, into the arms of the confessor

and the priest, just as the woman of fashion in France takes the veil when the sunshine of her pleasure is over. The majority, however, contented themselves with setting up a middle age picture of human existence in place of that rigid philosophic system of ideas which threatened to break down every cherished tradition, to subvert the old historic bases of society, to blot out all artificial distinctions of rank from amongst mankind, and to reconstruct the world of human society anew upon *reason* and *right*.

These attempts of the romantic school, however, as far as the philosophic element is concerned, were soon cast into the shade by the rising star of Schelling and the *Naturphilosophie*. Schelling possessed a temperament extremely different from that of Kant and Fichte, though, strictly speaking, he took up the thread of speculation where *they* had left off. His mind, instead of being cast in that rigid logical mould which characterized his predecessors, was decidedly genial and poetical in its tone and tendency. He was one of those young and ardent natures which arrive at an early maturity, and pour out their luxuriance of thought and fancy in the first gush of productive effort. Schelling's writings, accordingly, are far from being systematic, and still farther from being progressive and self-consistent throughout. He was roused early in life by the genius of Fichte to philosophic thought, and came forward virtually as his apologist and disciple when Fichte himself was under the cloud of popular opposition and censure. But it was only for a brief period that he remained true to that subjective principle with which his philosophical career commenced. One work followed another with almost overwhelming rapidity, and that in a series by no means characterized by any definite logical development—a series which seemed rather like a succession of dissolving views, each brilliant and captivating for the moment, but then merging into some other form of speculation equally beautiful and evanescent. Schelling's philosophical writings, accordingly, must rather be regarded as a succession of pregnant and suggestive *fragments*, than viewed in the light of one connected system of ideas. Their tendency, however, has uniformly been to bear away from the sub-

jective and critical extreme towards the more objective, the more positive, and to some extent even towards the romantic.

Fichte, as we have seen, had already idealized the general conception of human science; it was Schelling's great work to apply the ideal philosophy to the study of nature, the key-stone to his whole system being—*that all nature is, truly speaking, a manifestation of mind.* The philosopher, according to Schelling, must not be an every-day thinker; nor must he be one of those who are merely skilled in the formal processes of logic;—he must be, on the contrary, a man of true genius, a man who has the gift of *intellectual intuition*, and who, by virtue of this power of philosophic insight into the secret workings of nature, can look through the veil of the material, in which it is embosomed, and see the spiritual reality. The man who can so interpret nature will be in no danger, on the one side, of viewing it as dead matter, impelled by mechanical forces; nor, on the other side, of confounding it, as Fichte did, with the subjective or individual principle, the personal and percipient mind. He will see rather, that nature and soul, differing in their phenomenal existence, are one in their ultimate essence; and that the contrast between mind and matter, which must ever appear obvious enough upon the surface of things, vanishes when we trace them up to their first and inmost principle. Viewed here, they are *absolutely one.* From this principle it was that the system of Schelling assumed the title of the *Identitäts-philosophie.*

It must in justice be confessed, that the mode in which Schelling conceived of nature as a system of living forces, homogeneous with mind itself, is one which has largely been gaining ground in modern times, and that, too, amongst purely physical investigators. The more we penetrate into the *essence* of matter *as matter*, the more it is found that the problem eludes our search, and the nearer it brings us to the confines of what we call *the immaterial.* Schelling, to make good his ground in this respect, goes into a very minute exposition of the real elements out of which our whole conception of nature is compounded, and shows how they may all be viewed as the obvious results of

living forces, engaged in a connected process of self-development. First, there are the forces of inorganic nature; and what other rational expression can we get for these, than that of an expansive and an attractive *power*, the two resulting at last in the phenomena of gravity? The science of mechanics, again, it is well known, measures matter merely as so much *force*; it is only the unphilosophic mind that views it as so much dead and immoveable substance. To the forces of purely inorganic matter succeed those more ethereal powers which we know under the names of magnetism and electricity, the mysterious connection of which with the primary phenomena of organization (we may remark in passing) is now largely believed, though not by any means adequately explained.

These forces bring us next into the region of organization, which Schelling traces up through the phenomena, first, of reproduction, as seen throughout the vegetable world; then of irritability, as the incipient manifestation of animal existence, until at last we reach the first indication of *sensibility* itself. Having arrived at sensibility, the philosophy of nature hands us over to the philosophy of mind. Beginning with bare feeling, as the intermediate link between nature and the soul, Schelling traces the *ideal* side of the process, just as he had done the real, through the different phenomena of sensation, intellection, and will, until *the individual* is complete, and begins to play his part on the broad theatre of the world. The human individual, striving after unity, next combines with other individuals, and forms a social state and a civil government; and lastly, the entire progress of society in the world forms the wondrous drama of human history.

Throughout the whole of this process, Schelling attempts to show that there is but one principle of mind and reason in operation. The absolute reason embodies itself even in what we term *inorganic* matter, and there developes powers on which the harmony of the entire material universe depends. The same reason enters as an organic law into the infinitesimal germs of vegetable life, and brings forth, on every side, forms of inexhaustible beauty. Reason next comes to consciousness in the kingdom of animated nature,

and goes on building up the organic frame to an ever higher degree of perfection, until in man it reaches the stage of *self-consciousness*, and can gaze with intelligent wonder upon its own work. Finally, in society and in history it carries on a still further development, as the powers of universal humanity unfold, and urges us onwards along a career of progress, the law of which we can comprehend, but the consummation of which is involved in the mystery of futurity.

Such is the fundamental point of view from which Schelling started in his earlier philosophical efforts. With regard to his method, we have, in the logical form through which these ideas were conveyed, the first clear manifestation of the triple dialectic process by which thought rolls forward from step to step in its career of self-development, rising at each pulsation to a higher category, and constructing the form of every truth in its mighty progress. As this will come more fully before us when we treat of the *Hegelian* system, we leave it for the present without further exposition.

The later phases of Schelling's philosophy we need not touch upon. They were chiefly characterized by unavailing attempts to reconcile the pantheistic standpoint which he first assumed with the notion of a personal Deity, and with the fundamental dogmas of the Catholic faith. In doing this, he lost the freshness and charm of his first philosophic principles on the one hand, without solving the problem of religion or satisfying the practical religious requirements of humanity on the other. He merely glided step by step into a strained, unintelligible mysticism, and, without acknowledging it, became a foe to all purely philosophic speculation, and a tacit abettor of an antique romanticism. The followers of Schelling formed two distinct schools. Those who attached themselves to his *Natur-philosophie* (such as Oken, Steffens, Carus, and others) have really done good service in spiritualizing the physical philosophy of the age without running into any censurable extravagance; while those who started from Schelling's later mysticism (such as Schubert, Baader, and others of smaller dimensions still) have done little else than revel in a species of senti-

mental mysticism, sometimes of more elevated, and at others of a very mean and trifling, character. But the influence of Schelling was not confined to Germany. His attempt to unite the process of the physical sciences in one affiliated line with the study of man, both in his individual constitution and historic development, has also had a very considerable result out of his own country. No one, for example, who compares the philosophic method of Schelling with the *Philosophie-positive* of Auguste Comte, can have the slightest hesitation as to the source from which the latter virtually sprang. The fundamental idea is indeed precisely the same as that of Schelling, with this difference only, that the idealistic language of the German speculator is here translated into the more ordinary language of physical science. That Comte borrowed his views from Schelling we can by no means affirm; but that the whole conception of the affiliation of the sciences, in the order of their relative simplicity and the expansion of the same law of development, so as to include the exposition of human nature and the course of social progress, is all to be found there, no one in the smallest degree acquainted with Schelling's writings can seriously doubt.

Before we proceed to the Hegelian system, let us make a brief pause and look back upon the course we have already traversed. Kant, we have seen, showed by a very acute process of criticism that the human reason, in attempting to arrive by a speculative process at the knowledge of supersensual realities, such as the essence of the soul, or of the universe, or of God, becomes involved in hopeless contradictions, from which it can never free itself by any scientific procedure. Fichte accepted these contradictions, and made the solution of them the very principle of his scientific system. We never can arrive at these realities, he affirmed, and that for the obvious reason that they are, in fact, *no realities at all*, apart from the percipient and thinking subject, '*the me.*' In this way he based the whole system of human knowledge upon one simple foundation, showed the perfect unity of thought and being, made substance but a form of the infinite personality, and raised human nature, morally speaking, to what he regarded as its

true position of absolute freedom. Schelling, taking up the thread of speculation, and accepting the idealistic basis of the universe on the one hand, while he avoided the one-sided subjective principles of Fichte on the other, evolved in this way a theory which maintained the *fundamental identity* of mind and nature, and then sought to make good his ground by translating all the natural phenomena of the universe into the new-found language of idealism. The attempts of both these remarkable minds to reach the truths after which they were aspiring, were, however, fragmentary and imperfect; they failed in laying hold of any great central principle or method by which the *logical*, the *physical*, and the *moral* order of the world could be reduced to one connected system, and the perfect harmony of thought, nature, and human history be made clearly apparent. This final step was left for the philosophic genius of Hegel.

The extension of the Hegelian philosophy, its wide acceptance, and its influence upon German society at large, are phenomena which appear almost unprecedented in modern times, and have commonly been, to English spectators at least, perfectly unaccountable. We shall endeavour to clear up the mystery a little, by pointing out on the one side the real elements of common sense which this system contains, and on the other side the peculiar circumstances in the political and religious position of Germany which greatly contributed to its extension.

Hegel's aim in his first great philosophical work (*Phænomenologie des Geistes*), which he usually termed his 'voyage of discovery,' was very simple as well as very necessary. He did not plunge at once into any one-sided idealistic principle, like that either of Fichte or Schelling; but taking for granted, according to the spirit of the whole modern science from Kant downwards, that truth really exists, and that it is possible to rise to a clear and adequate perception of it by some medium or other, he set about a sober and critical examination of all the facts of the case.

If human knowledge, he thought, really tends to a truly complete and philosophic form, then it will be well to watch *the process* by which this end is obtained—to watch it, on the one side, as it appears on the sphere of the individual

consciousness, and on the other side, as it appears upon the sphere of man's historic development in the world. Starting with this idea, he takes an inventory of all the phenomena of mind, viewed as the great organ of truth; he explains the relation of the subject to the object, as seen in the common unreflective process by which the ordinary human consciousness grasps and appropriates the realities of the external world; he shows how the light of self-consciousness breaks in—that light in which the mind views everything in relation to itself, and asserts its own supremacy over nature and human life; finally, he follows up the process until he arrives, through the different stages of man's moral and religious development, at *philosophic knowledge*, properly so called—knowledge in which individual phenomena are seen only as the results and applications of the universal laws of existence.

To illustrate the nature of philosophic knowledge in this sense, let us take an illustration suggested by one of Professor Oersted's beautiful dialogues, in his work entitled *The Soul in Nature*. Suppose you are revisiting a charming waterfall which you had seen and admired the previous summer. The scene that your senses actually gaze upon is precisely the same as it was before; there is the stream rolling over its ridge of rock; there are the hues of the sunshine playing upon it, the spray throwing its almost invisible mist over the surface, the green leaves, the flowers, the shadows of the trees, and the roar of the cataract. And yet, when you *interpret* the scene which the senses reveal by your inward *reason*, you know that not one particle of what we term the actual, material reality that before met your eye is now left,—the water has flowed to the ocean, the sunshine renews itself every instant, verdant nature has died away and reproduced itself,—nay, if we could only understand the secret physiology at work through every atom of its organic structure, you would see that its very existence is a constant process of life and death, and never for one instant a fixed existence. Well, then, what do you *really* see when you stand and contemplate the scene? You simply see the *complex result of a number of natural laws*,—laws which form the interior essence of nature herself, and

are but the outward expressions of the infinite *thought* from which it came. *Which then shall we say is the reality?*—the mere phenomenon which the senses reveal, or the laws which produce that phenomenon, and which are accessible only to the grasp of reason? Clearly the latter; for that alone is the abiding truth, while the other is a mere outward appearance that passes away and anon renews itself.

If our readers have followed the spirit of this illustration, they will probably find but little difficulty in understanding Hegel's fundamental point of view, which regards all *existence* as consisting in *a process* eternally going forward, a perpetual position and negation, a constant coming into being and passing *out of* being, an unceasing struggle between life and death. But then, how must we *systematize* this conception of the universe? how must we reduce it to one intelligible principle, that can explain, by its direct application, all the phenomena of mind, of nature, and of human life? This is the task which Hegel set himself to accomplish in his logic and its subsequent applications.

If all existence be a process, then we must admit, as a necessary consequence, that the *law of this process* is the abiding reality, a reality which merely *reveals itself* in phenomena. But what is a law but a thought or purpose actualized and sent upon its mission in the world? Thought and existence, accordingly, are *essentially* the same, and the laws of thought, if rightly understood, must be identical with the laws of being. Hence, to investigate the laws of thought is the same thing as to investigate the laws of existence; logic and metaphysics fall together as one and the same science, and, combined, give us a fundamental department of philosophy, in which we can study, at one and the same time, the forms of all thinking and of all being in the universe around us.

From the study of thought in itself, *i.e.* in its fundamental forms and processes (to which correspond the fundamental forms of existence), we can then ascend to thought in its manifestation—thought embodying itself in the laws and the products of nature; and finally, we can see thought returning to itself, and coming to self-consciousness in humanity. In this way we shall have all the regions of

philosophic investigation bound together in a grand unity, and reduced to perfect order and harmony by the regular process of one vast logical development.

It only remains for us, then, to see what is this logical, or, as it is more commonly termed, this *dialectical* method, the knowledge of which is to reveal the great pulsations by which the life of the universe is carried forward. The science of logic, from the time of Aristotle downwards, has expounded more or less clearly the real abstract processes of thought; and to this science, therefore, we must look now to reveal its more universal laws. Logic, in the Scholastic sense, falls into three parts—the doctrine of simple apprehension, or Ideas; of judgment, or the Proposition; of reasoning, or the Syllogism. In an *idea* we have simply an *undivided* thought; in the *proposition* we see this thought separating itself into two portions, the subject and the predicate; in the *syllogism* we see the parts which had been divided combining together again into a new conclusion, or a higher unity. This process Hegel accepts as being virtually the law of all thought, which, he shows, must consist uniformly of a separation into two opposites, and a reconstruction of them into a higher and more advanced conclusion. Thus we can form no definite conception of the infinite without putting it in contrast with the finite—no idea of cause without effect, or of the living body without the soul. Or take again the idea of being *per se*, and consider what it involves. The moment you begin to apply the power of thought to its analysis, you find that the whole conception you can form of it is *the negation of all determining attributes*. This idea, accordingly, like all others, divides itself into two opposites—being on the one side, and negation on the other; and it is only when you take these two parts into account, and put them side by side, that you can listen, as it were, with the ear of reason to the process by which thought passes over from nothing into the first and barest conception of *existence*. Beginning then with bare existence, Hegel has shown in his logic how thought rolls onwards in its course by this triple dialectic process, gaining one category after another, until it has deduced the forms of all existence, of all the pheno-

mena in nature, and finally, of all life and intelligence itself.

Having once got, therefore, the great law of thought, which, as we have before seen, is identical with the law of being, we have but to apply it to the various departments of psychology, morals, jurisprudence, æsthetics, religion, philosophy of history, etc., to solve all the great questions of human interest, and build up our knowledge into one vast scientific system.

What Hegel really did in taking the syllogistic logic as revealing the absolute laws of thought, is, in fact, a virtual falling back upon Scholastic authority. He began by viewing, as Kant did, the proposition as the absolute form of all truth, and then, perceiving that the subject and predicate vary indefinitely, while the copula remains the same, he elevated the copula itself (*i.e.* the relation between objects) to the highest principle of philosophy, and made all truth and all reality to consist in the laws of that relationship instead of the objects to which they apply. This part of his philosophic system, to say the least, comes very near to a play upon *words*.

The ingenuity and deep insight with which Hegel applied his logic to the various questions of human interest,—the profound glimpses he gave into the nature of psychology, the theory of morals, the principles of jurisprudence, the philosophy of art, and more than all, the development of human history,—tended, however, greatly to maintain the credit of his system among his first disciples. Still, if we would comprehend the real causes of its rapid extension, we must take a variety of collateral circumstances into account, some of which it may be desirable for us to glance at as we pass.

First, then, we must remember that from the time of Kant downwards, it had become almost a necessity of the German mind to have scientific knowledge presented in a systematic form. The struggle of the German people for national independence had indeed broken in for a time upon the steady progress of speculation, but now, just as that struggle was over, here was a philosophic structure ready at hand, perfectly symmetrical in form, and which

exactly answered to the requirements of the age. Calm, logical, unexciting, wholly architectonic in its form, it seemed to afford that repose to the mind which was absolutely needed after the mighty storm through which it had passed. As Fichte's was the philosophy suitable for a period of *struggle*, so Hegel's, in its original form, was equally the philosophy suited for a period of *rest*, and owed, undoubtedly, a considerable portion of its early celebrity to this fact.

Again, there were more *direct* political causes, which favoured its expansion. The Prussian king, Frederick William III., had formed, and was anxious to carry out, a state plan for uniting the whole Protestant church within his dominions under one banner; and he looked with very decided complacency upon the Hegelian doctrines as tending to allay the petty differences which existed between communities, and to unite them upon one broad philosophic basis. His prime minister, Altenstein, was himself a zealous disciple of Fichte, and as such conceived that a philosophical interpretation of church life, Christian dogma, and state policy was decidedly advantageous in itself, and highly conducive to the political and religious interests of the community. Hegelism, accordingly, basked at Berlin, as well as at the other Prussian Universities, in the sunshine of court favour, and ascended the chairs of public instruction with a kind of royal authority enstamped upon it.

This golden age, however, soon passed away; the royal patron paid the debt of nature, and another sovereign ascended the throne. Almost simultaneously with this event, the stifled murmurs of political discontent began to make themselves heard; and the demand for a popular constitution, which had been faithfully promised during the national struggle, but unfaithfully deferred, now gradually gained a stronger and more decided voice among the people. The philosophic spirit which had *speculated* at its leisure, and pictured the most enchanting visions of freedom *upon paper*, began gradually to sink into the minds of the people at large, and to embody itself in a more practical form. Speculatively speaking, freedom had been asserted and recognised by every philosopher, from Kant downwards.

The reason was proved to be free; the will was declared equally so; society was shown to be a combination of free agents, united for the fuller development of their own nature, while government was but the actualized expression of the national will. These kinds of theories had a hundred times been expounded with infinite care, and illustrated with all the apparatus of logical diagrams. So long as they were confined to the lecture room, they naturally occasioned no uneasiness; but as soon as they descended amongst the people, and threatened to become really *practical*, it was seen that they stood in very obvious antagonism to the policy of every absolute or even semi-absolute government. Hegelism, being the most recent, and at the same time the most perfect, expression of the speculative spirit of the age, thus began to be identified with the cause of popular political liberty; while the opponents of this philosophy, both in church and state, were looked upon more or less as the allies of absolutism and the foes of German freedom.

To understand the progress of events more accurately, we must refer briefly to the *splitting up* of the Hegelian school into several almost antagonistic parties, which now took place. Soon after Hegel's death, a contest arose among his followers as to how they should interpret his views respecting the divine personality, the immortality of the soul, and the fundamental ideas of Christianity—a contest which soon separated the entire school into *three* distinct sections. The watchword of these parties, speculatively speaking, was taken from the theory they severally maintained on the question of *immanence* and *transcendence*. The term immanence, we must explain, implies the unity of the intelligent principle in creation with the creation itself, and of course includes in it every genuine form of pantheism. The term transcendence implies the existence of a separate divine intelligence, and of another and spiritual state of being, intended to perfectionate our own. There were many earnest thinkers in Germany, who, while they admired the Hegelian method as a wonderful development of the logical forms of thought, yet deplored the twilight in which Hegel had left all the great questions relating to

religion, to God, and to immortality. These, accordingly, formed a school at the extreme *right*, as it was termed, which, while it availed itself freely of the Hegelian logic, uttered its voice strongly in favour of the divine personality, the existence of a spiritual world, and the necessity of a positive Christian faith for the peace and progress of the human mind. This point of view was represented by Göschel, Gabler, and some few others of theological proclivities.

The party which stands next on the Hegelian scale, was composed chiefly of the personal friends and pupils of Hegel himself, and who, therefore, regarded themselves as forming the centre or middle point between all the other divergences. The aim of this party was to hold exactly that indefinite position which the master himself always maintained in reference to the question of immanence and transcendence. That the divine essence is immanent in the world they appear pretty plainly to maintain, but only in the entire consciousness of humanity, in which and through which the whole intelligence of the universe attains its free and reflective form. Thus, *quoad the individual*, there still exists a *transcendence*—*i.e.* an infinite reason beyond our own, and a possible futurity; although, *quoad the universe*, the *immanence* of the divine life and reason they consider must be firmly maintained. The most prominent representatives of this phase of the question were Marheineke, Michelet, and Rosenkranz.

Of the three parties to which we are now referring, the last, or young Hegelian, was undoubtedly the most energetic as well as daring—nay, the only one which formed a distinct school of thought that exerted a popular influence upon the German people at large. Amongst them the doctrine of transcendence was finally abandoned, God and the world became identical terms, and pantheism drew itself nearer and nearer to the atheistic side of the question. The contest which arose among the followers of Hegel turned, as already noticed, upon the *theological* bearings of his philosophy. While various of his disciples were developing the master's views on the side of law, morals, æsthetics, history, nature, and psychology, according to their respec-

tive leanings to one or other of these branches of inquiry, the theological question gathered around it an amount of popular and practical interest which made it the great battle-field for the entire speculative spirit of the age.

Strauss was the first who stepped clearly out of the cloud in which the Hegelian philosophy had enveloped religious questions, and pronounced clearly his dissent from the historical truth of the Evangelical narratives. That there is *some basis* of historical truth at the bottom, he allowed; but then he endeavoured to show, that just as in all other great developments of thought, so in the rise of Christianity, the enthusiasm of the early converts erected spontaneously, upon a small groundwork of fact, a large superstructure of religious mythology, by translating their wishes, hopes, aspirations, and ideas into the language of historical reality.

This view of the gospel narratives, it is evident, draws the whole contest between Christianity and unbelief into a new point of view, and brings fresh weapons to bear on each side of the question. The old English deists, unskilled in historical criticism, and living, as they did, before any researches into the genesis of historical ideas had been instituted, admitted as wholly beyond question the historical authenticity of the whole of the sacred books; but as on rational grounds they rejected their contents, they were constrained by the very logical position they occupied to place the sacred writers themselves in the light of hypocrites and deceivers. Over this polemic Christianity gained an easy victory. The transparent honesty, the intense earnestness, the high moral grandeur, of the first Christian teachers, crushed under its subduing power every attempt to aim a blow either at their moral principles or motives.

The German rationalistic school, which followed (*rationalismus vulgaris*), planted itself on quite another basis; it began by admitting the historical authenticity of most of the sacred books, and also the *purity and integrity of the writers*, but endeavoured to show that what was written in an age of wonder, and under circumstances of intense enthusiasm, must be *accommodated* to our more cool and rational method of judgment. Under this notion, they gave us a new version of the Scripture miracles, stripped by

the hand of criticism of all their supernatural dress. Thus the moral idea and the religious elevation remained, while the miracle and the wonder softened down into events perfectly explicable, *in the present day*, by the ordinary laws of nature. This system of what is commonly called anti-supernaturalism had also its little day; the farther it proceeded, however, the more it became entangled amongst those obstinate assertions of miracle which proved to be so interwoven with the sacred narratives as only to be drawn out by plucking every thread of the entire texture to pieces.

It was just at this time that the researches of Otfried Müller and others began to throw new light upon the philosophy of history, and more especially upon the *early mythology* of nations and the rise of great national ideas. Müller's great principle was, that those myths which always penetrate a nation's early life are never the production of an individual mind, but rest upon the higher and more general foundation of the entire spirit of the people; that they are, in fact, allegorical expressions which have grown up in the life of the nation, of their inward sentiments, aspirations, or beliefs. Several writers previous to Strauss (Bauer, De Wette, and others) had shown the applicability of this principle to some of the early records preserved in the Old Testament; but it was left for him to found upon it an entire theory respecting the basis of early Christianity. Taking into account the old Hebrew Messianic belief; the wants and aspirations of the age; the restlessness with which men looked from the political troubles and popular vice of that period for a purer and diviner life; the power with which they were driven back, by the breaking up both of the Jewish and the heathen traditions, upon the primary elements of our moral nature and our fundamental human hopes—all this, he affirmed, borne upon the tide of an intense enthusiasm, was *sure* to express itself in some concrete and apparently historical form. The real life and character of Christ, accordingly, gave the historical basis for the structure; the hopes of the Eastern world then gathered gradually around it; the facts and traditions in which the Christian churches commenced were the centre around which the thought of the times crystallized; and

thus the whole edifice of the Christian faith grew up as the natural production of an age unexampled for the intensity with which man was thrown back upon the great problem of his nature and destiny. According to Strauss, therefore, the historical Christ became gradually a kind of type of humanity; and his final apotheosis expressed the longed-for apotheosis of man himself—the union of the divine with the human in the life and consciousness of humanity at large. Few, perhaps, would now contend that this mythical theory of Strauss can stand its ground *entire* against all the force of that new historical criticism, which it has aroused to so large an extent, that we begin already to speak of the *Leben Jesu literature* as one of the great phenomena of the times. None, however, who are well read in that literature, can now accept as secure the old defences which were thrown up against the former deistic controversialists. The entire polemic between Christianity and unbelief is carried up into a higher arena, where a keen historical research into the rise and growth of ideas and dogmas bears down from time to time, with destructive energy, upon both hosts of combatants. If, on the one side, it cuts the ground from under the feet of the Straussian school, it only does so by *vastly enlarging the basis* upon which the pillars of Christianity rest. In this way the Straussian controversy has really marked an era in European thought; it laid the basis for that vast secession from the Catholic Church in Germany which the fable of the holy coat put into operation; it has shaken the old system of verbal literalism even in countries where that system maintained its stronghold for ages before; it has rendered a more free and spiritual interpretation of Christian ideas a necessity of the age, which only the blindest of the blind refuse to admit; it has made most of the old doctrinal disputes which rent the church and the world seem like so much solemn trifling, and has thrown us all alike back upon the essential elements of the Christian life as the only thing for which it is worth our while to labour and contend.

Strauss, then, we may term the negative and critical spirit of the school; in him the Hegelian philosophy came first to an open rupture with orthodox Christianity. Feuer-

bach, the next in the order of development, leaving the path of negative criticism, took up the question of the essence and genesis of *religion* as a universal fact of human nature. Religion, according to him, is a man's relation to his own essential humanity. The consciousness of God is really the self-consciousness of man. The divine nature is no other than human nature idealized and personified. The conception we form of humanity, with all its powers and faculties, its aspirations and its destiny, is projected, as it were, upon the spread-out cloud of our phantasy, and regarded apart as a supreme and infinite personality. Worship, accordingly, is *love*—love to humanity; to love God is to love the nature of man; to serve God is to serve the true interests of man, by bringing him ever nearer and nearer to his true ideal. Feuerbach thus exactly *inverted* the original process of speculation. The German idealism began by affirming *the absolute*, and then strove to deduce from it all the phenomena of existence in regular logical order. Feuerbach accepted the individual man, with his senses and instincts, his faculties and emotions, as *the real* and *the true, par excellence;* and from this as his *absolute*, he deduced the nature of religion and the God of religious worship.

It can hardly fail to strike the philosophic reader that the system of Feuerbach well-nigh completes the cycle of speculation, and lands us again *very near* the point of view from which it started as a popular system during the French Revolution—I mean the system of pure sensualism in which man and his personal enjoyments become the Alpha and the Omega of all human interest. Although Feuerbach himself still remained standing on the loftier platform of humanity in its ideal, yet it needs but one step (a step which has been already taken by some of his disciples) to bring this ideal down again to the real, and to make *sense* once more the sole God of man's worship and admiration.

As logical combatants, these daring spirits have certainly shown themselves formidable to those who enter with them into the arena of abstract disputation; still it cannot but strike a calm looker-on with something like wonder, how the most obvious and startling objections are lost sight of

in the heat of metaphysical disquisition. Starting from the subjective side, and analyzing simply the processes of human thought, it may be easy for them to construe the great idea of God in many different forms. From a divine personality they may show that it is a very easy transition to make the absolute coincident with *the soul of nature*, which having passed through the various stages of unconsciousness, comes at length in man to a self-conscious existence. It may then be easy enough to show, with another stroke of the logical wand, that the divine consciousness is nothing else than the ideal of humanity; that the reason of man, therefore, is the highest reason in the universe, and the will of man the supreme *power*.

But now let us wake the logician out of his dream of ideas, and place his divinity face to face with the standing wonder of creation. Surely creation must be the work of the *highest* reason, and the effort of the *supreme* will. If this reason and this will, supreme knowledge and supreme productivity, be really concentrated in the human consciousness, then we say to this divine humanity, '*Carry on the work of creation*, or at least explain to us its inmost secrets. Show us the point in the history of man's reason and will where human power can create one little flower of the field. If the consciousness of man can neither *create* nor comprehend the wonders of what *is created*, then let it bow in submission before the infinite power and productivity which holds all things within its grasp, and by transcending our highest thoughts shows that we are creatures and not creators, and that our reason is but a spark from the infinite reason above us.' Such a solution of the great world problem as this philosophy affords may satisfy a mere dialectician; but it will never satisfy the wants of the human *soul* in the midst of its hopes and fears, nor of the human *reason* either, when it once breaks through the circle of a logical system and roams at large over the standing wonders of the universe.

In *Arnold Ruge* the spirit of German speculation has come out of its abstract and dialectical form, and addressed itself at length to the attainment of practical ends. Religion, according to Ruge, is the natural impulse of the human soul after the ideal; it is man's effort to realize the

highest perfection and the highest freedom under all the different forms in which they can be attained. The three great fields of human effort are knowledge, art, and practice; and the true function of the religion of humanity is to give the utmost *freedom* to man in the prosecution of all that is comprehended in these great ends.

It will easily be seen how direct the bearing of this philosophy must be upon the political agitations of the age. Man is bound by all that is sacred in his religion not to lie down patiently under oppression, and look for his bliss in a future state *only*. The world is the real sphere of humanity; and everything which conduces to the perfection of man's nature in society, must be pursued in spite of all the opposition we may encounter in the path. *Humanism*, then, is at once the religion and the philosophy of the age; for all the aspirations of the one, and all the conclusions of the other, centre in humanity as their great end, and proclaim the highest culture and freedom of humanity to be the *purpose* for which we have unceasingly to strive.

Here, then, we have the final conclusion at which the Hegelian philosophy, in its latest form, arrived. The Revolution of 1848 marks the termination of its efforts. Strauss and Feuerbach remained in Germany, shielded by the abstract form of their philosophy from the hand of political persecution; Ruge paid the penalty of his practical tendencies in confiscation and exile.

The outcome of this last school of German thought illustrates the tendency which one extreme always has to generate another. The philosophy of Fichte was, no doubt, *an extreme*—an extreme which maintained pure idealism on the side of ontology, a rigid morality on the side of ethics, lofty aspiration on the side of religion. But the logical process goes on unrestrained by tradition or common sense; and in one generation what do we find as the result? That religion becomes simply the worship of human nature; that morals become unmitigated caprice and selfishness; and that ontology becomes undisguised materialism. Buchner, Vogt, and Moleschott are the final issue of a system of speculation which began in making '*the me*' the first principle and basis of the universe, and now ends in making

that universe to consist wholly in matter and its modifications.

B.—Realistic Side.

We now turn from the idealistic to the realistic side of the question, which is represented, in the first instance, by John Frederick Herbart. Herbart was born in 1776 at Oldenburg, and even in early life showed signs of great mental capacity. He studied at Jena, where he attended the lectures of Fichte, at that time in the height of his renown as a philosopher. But far from being carried away by the tide of idealism, then just beginning to rise, he openly expressed his dissatisfaction even to Fichte himself, who attempted, perhaps for a short time *successfully*, to combat the objections he had to offer. In 1805 he became professor of philosophy at Göttingen, and in 1808 succeeded to the chair of Kant at Königsberg. Here he laboured for twenty-five years, raising his voice, not without effect, against the rampant idealism which seemed to him to be running away with the speculative brain of his country.

Herbart takes his start from the realistic side of the Kantian philosophy. His primary axiom is, that all our knowledge begins in and is grounded on experience. Instead of assuming the existence of some absolute *being* as the first principle of all things, he regarded the whole mass of our ordinary perceptions as containing the *matter* from which alone we must take our departure in building up a system of philosophy. That we do actually possess a mass of notions and ideas which are naturally formed in the mind by its own constitution, and the circumstances in which it is placed, none can deny. These ideas, he shows, we must detain, examine, elaborate, so as to solve any contradictions they may seem to imply, and thus render them self-consistent one with the other.

The process by which the necessity of philosophy comes to be felt is this:—Looking around upon the world in which we live, our knowledge *commences*, first of all, by a direct perception of the various objects which present themselves on every hand. What we really and immediately perceive, however, is not *the actual things themselves*, but the pheno-

mena arising from the manner in which they affect our own minds through the senses. After a time, indeed, we discover that many of these phenomena are unreal, *i.e.* they do not portray the abiding truth of things as they really are, and if assumed as true, would soon land us in errors and contradictions. For example, what we are immediately conscious of in coming into contact with the external world are such appearances or feelings as green, blue, bitter, sour, extension, resistance, etc. These phenomena we discover, upon reflection, to be not *realities* external to ourselves, but modes in which our own minds and feelings are affected by external things. Again, if we ask what we mean by external things, we discover that they are not ultimate essences, but phenomena consisting of a number of elements, revealed by the different effects they produce upon ourselves. What we term the reality, then, is not the *thing as a whole*, but the *elements* of which it is composed. Thus, the further we analyze, the further does the reality recede backwards; but still it must be *somewhere*, otherwise, when perceiving, we should be perceiving a *nonentity*. Every phenomenon necessarily *implies* a reality; and as many phenomena as there are, just so many realities must we admit to exist. Experience, then, on the one hand, gives us a vast number of phenomena, which appear to us to be so many actually existing *realities;* reflection, on the other hand, obliges us to reject these phenomena as ultimate realities, and assign some simple element for the basis of all, and as that which alone is essentially real. Here, then, arises a contradiction between reason and experience; and as we cannot fall back upon scepticism without being involved in still greater difficulty, we look to philosophy so to elaborate and interpret our ideas—both those of reason and experience—as to solve the contradictions, and give us a connected, self-consistent view of the truth of things. This branch of philosophy is termed *metaphysics.*

Now, in order to see what branches of investigation the science of metaphysics contains, we have only to consider how many fundamental ideas there are into which our ordinary perceptions may be ultimately generalized. These undamental ideas, according to Herbart, are three—*thing*,

matter, mind; the first being the notion of a unity with various properties; the second being that of an object existing in space; the third designating that which has self-consciousness as a fundamental attribute. All these three fundamental ideas involve contradictions. Thus, for example, if we contemplate *a thing*, say a piece of gold, we observe that it is yellow, heavy, hard, etc., and all these properties together go to make up the unity which we term gold. If one of these properties were taken away, it would be gold no longer; and if they were all taken away, nothing whatever would remain *to our perceptions*. Here, accordingly, we come to a *contradiction*, viz. that the unity is a plurality, and the plurality a unity. Again, if we analyze the notion of matter, we find it is that which fills a certain space, while at the same time it consists of atoms *infinitely divisible*, and which in their ultimate form, therefore, can fill no space at all. Hence another contradiction, namely, that atoms, having no extension, should give rise to extended, solid, space-filling substance. So also, in our idea of mind, we have the contradiction that the one simple ultimate unit which we term our *personality* should be subject to perpetual change. These three ultimate ideas, giving rise each to their respective contradictions, demand three different investigations to elucidate and reconcile them. The first is *ontology*, which, in Herbart's sense, means the science that treats of the nature and constitution of bodies in general. The second is *synechology*, which is the doctrine of matter, or the phenomena of the real, as existing in time, space, and motion. The third branch is *eidolology*, which means the doctrine of images or ideas, and covers the whole ground of *psychology*.

Herbart treats of morals and natural theology on their own separate grounds. In fact, he makes no attempt to show how all human knowledge can be presented as *one unbroken system*, or to find any fundamental axiom from which it can be deduced. He is content to accept the data of experience as he finds them, and then, by a process of analysis, to strip them of all difficulties and contradictions, and mould them into the shape of consistent human knowledge reflectively verified.

The two former branches of Herbart's metaphysics do not present any matter of special interest, and, as far as I know, have given rise to no subsequent intellectual movement which is worth recording. Not so his psychology. An entire school of psychology has sprung up in Germany in the present century which owes its origin and its impulse to Herbart's speculations in this department. We must therefore mark some of its leading characteristics as possessing a distinct historical significance. Herbart pursues the investigation of mind exactly in the same way as he has done that of material objects. He does not attempt to find any primary substratum called the soul, but looks simply for the phenomena of the case; and wherever he finds phenomena, he affirms some corresponding reality. The field of these phenomena is the consciousness. What aspect, then, does the consciousness present? It presents a constant succession of images, a perfect phantasmagoria of ideas, emotions, desires, which come and go, we know not how, which crowd on the threshold of the consciousness and strive to enter. Some appear and vanish away, others reappear after a period of oblivion, and all alike seem to be subject to the same changes and to obey some invisible laws. This, then, is the sphere of observation which has to be investigated and explained. Now, first of all, we observe that there is in every man a direct consciousness of self, indicated by the constant use of the pronoun I or me. To this self some reality must answer, some monad which is the primary ground of *self-consciousness.* But this primary unit of self is undergoing perpetual changes. These changes, following the principles before evolved in the case of the external world, must arise from the effects produced by *real things* external to itself. In fact, the self, or as we may now term it, the *mind*, is acted upon by all the objects of the world around it. The consciousness is the theatre on which the conflict between self and nature can be observed. The objects brought home to the mind by the senses affect it, influence it, disturb it, and then a reaction sets in, which is the effort of the mind to *maintain* its place against all these attacks from without. This conflict between mind and

nature gives rise to perceptions, representations, ideas. If the perceptions are unlike, they clash against each other,—one retains its place in the consciousness, and the other dips down into temporary unconsciousness, until recalled again by some favourable combination of mental forces. If the perceptions are *similar*, they blend together, and thus acquire a twofold power of reproduction. When a great number of like ideas are blended in one, they give rise to general notions, and form concepts which govern our powers and habits of thought. Mental images, when they come clearly into the light of consciousness, and accumulate a great number of individual impressions, all blended together, form, as we said, notions, concepts, abstract ideas. When they strive at the threshold of consciousness for re-admission, a tension is produced, which is called *feeling*, or *affection*, or *emotion*, as the case may be. This tension may rise to the height of *desire*, and desire accompanied with the hope of fulfilment gives rise to volition.

From this outline it will be seen that Herbart rejects altogether every possible system of psychology which proposes to divide our mental activity into a certain definite number of powers or faculties. Every single mental representation, every feeling, every desire, every volition, is a *power;* and the working and interworking of these powers, he considers, can be explained on a system of mental statics and dynamics mathematically carried out, which reveals the whole play of the phenomena of the human consciousness. That he has thus opened up a fruitful vein of psychological investigation can hardly be doubted. The more technical part of his system, that which carries out the analogy between the mathematical principles of statics and dynamics and the striving of the mental powers in and out of consciousness, has already well-nigh passed away from the field of psychological investigation; but the *general idea* lying at the basis of the system has given rise to some of the most fruitful series of mental investigations which modern Germany has yet produced. Beneke first followed in the track thus pointed out. His system is *purely empirical.* He not only denies innate ideas, but also ignores the existence of any original *faculties*, and under-

takes to show not merely how our *notions* are formed, but the very process by which the mental faculties are constructed out of the original elements of our nature. The human mind (which he regards as having an existence distinct from the body) exists first in a state of bare receptivity. It can receive impressions; but it also has an original instinct to react responsively to them. This, then, is the starting-point,—impression and instinct,—and from these two the whole nature of the soul, intellectual and moral, is evolved.

Each impression we receive leaves a *trace* (*Spur*) behind it which may be revived and brought again into consciousness under the proper physical conditions. Day by day, then, while impressions are pouring in upon us, these traces accumulate. As they accumulate, the mind becomes more capable of understanding them, and more conversant with the outward objects from which they have been produced, until at length, by the result of this process, the power of perception becomes duly developed, and we call it a mental faculty. Thus, then, the two original factors in our mental development are outward impulses (*Reize*) on the one side, and the powers of inward reaction to each impulse (*Urkräfte*) on the other. These are the primary elements of our whole mental activity; and from this commencement our author proposes to build up empirically the entire structure of the mental faculties. As to the different *modes* of mental activity, Beneke derives them from the variable relation in which the primitive power stands to the outward impulse. If the impulse is less intense than the reaction, there will be a certain amount of inward effort over and above what is necessary to meet it. In this case, the mental phenomenon will be what is termed *volition*. If, on the contrary, the impulse is greater than the reaction, then the mind is *receptive*, and we have the phenomenon of feeling or emotion. If, thirdly, the impulse and effort exactly counterbalance each other, the result will be a clearly-defined image which we term a perception.

Beneke goes at great length and with extreme minuteness into the laws by which mental traces are reproduced and combined. When a number of perceptions are attracted by

virtue of their *similarity*, and melt, as it were, into one another, they give rise first to ordinary notions, and then to more abstract and general ideas. When combinations take place between *unlike* elements, they form groups or series of mental images, as seen in the developments of productive imagination and many other phenomena connected with the association of ideas. The very same laws of combination apply with like force to the active powers and the emotions; so that by these means we can trace the growth of all our sentiments, our habits, and our higher principles of action, and build up, in a word, the entire spiritual nature of the man. This whole system Beneke applied to the practical purposes of education, and even instituted a journal in order to disseminate his doctrines, but was suddenly and unhappily cut off in the midst of his labours.

The most eminent writers who have followed in the path thus pointed out by Herbart and Beneke, are Exner, Drobisch, Waitz, and to some extent Fortlage and George; and even where psychological investigation has taken another course, we still see the inevitable traces of this school upon the writers, showing that it has produced a lasting effect upon the philosophical progress of the country. In the two latter cases we see the tendency (already apparent in our own country) of treating mental phenomena as a higher branch of physiological research, and bringing the laws of life and growth to bear upon the right comprehension of mind in all its phases. This is but another symptom of the general fact, that the age in which we live has become averse to *mere abstract speculation*, and demands some basis in actual experience, even when indulging in the highest flights of scientific generalization.

C.—Attempts to mediate between Idealism and Realism.

We have seen in the preceding pages the extremes into which the overwrought speculation of Germany was running during the earlier portion of the present century,—one side making 'The Me,' or 'The Absolute,' or 'The Dialectical Process,' as the case might be, the first principle of all

things; the other side drifting into utter humanism and crass materialism. We have now to direct our attention to the efforts which have been made to steer a middle-course between these two extremes, not by adopting the theory of *dualism*, which is perhaps, logically, the most untenable of all, but by combining both extremes in one common principle, and showing that they are two branches uniting at the one hidden root.

The pioneer in this pathway was Arthur Schopenhauer, who, as far back as the year 1819, published his chief philosophical work under the title, *Die Welt als Wille und Vorstellung* ('The World as Will and Ideal Representation'). For many years little notice was taken of this remarkable treatise. In the year 1839, however, Schopenhauer was elected a member of the Academy of Sciences in Sweden, after the publication of his prize memoir on *The Freedom of the Will.* This fact, together with the now waning influence of idealism in Germany, turned the attention of philosophic thinkers once more to the long-neglected work above mentioned. In 1844 a new and enlarged edition of it was published; and from that time Schopenhauer has taken his place with steadily-increasing reputation amongst the most remarkable metaphysical writers of the age. To this result various things have contributed. First of all, Schopenhauer has always stood aloof from the *professional teaching* of philosophy, and has renounced in his writings the use of all the old technical traditional phraseology by which, he affirms, the professed metaphysicians have been long imposing upon themselves and other people. His polemic against the University professors of philosophy gives rise to some of the most piquant passages in his various writings.

Then, secondly, the character of the times has favoured a writer who set himself in opposition to modern Scholasticism, and chose rather to write for the great world without. Thirdly, though Schopenhauer has formed no *school* (which he, indeed, had no desire to do), yet he has reaped the advantage of a circle of admirers, some of whom, like Frauenstädt, have popularized his philosophy by admirable digests and expositions of the doctrines it contains. From

these and other reasons, Schopenhauer has obtained a popularity which few others of the present day can boast of, and which renders his system well worthy of our attention.

Let us first of all see how Schopenhauer separates himself from the doctrines maintained by earlier teachers. I will take the following account of it from one of Frauenstädt's letters, as being the representation of the pupil *most of all intimate* with the thoughts of the master.

'Schopenhauer shows us,' says Frauenstädt, 'how, since Descartes, all philosophizing turns upon the question of the ideal and the real—that is, of what is *objective* and what is *subjective* in our knowledge; what, therefore, is to be ascribed to things separate from us, and what to ourselves. Accordingly, for the last two hundred years the main effort of philosophers has been clearly to mark off what belongs to our knowledge *alone as such* from the *real*—that is, from what exists independent of it—by a well-defined separation line, and thus to fix the relation of both to each other. This line, however, Descartes has not drawn in the right place. The Cartesian opposition between thought and extension, with the solution of which Malebranche and Spinoza, as well as Leibnitz, busied themselves in various directions, falls, as Schopenhauer, in common with Kant, has shown, entirely *within* the province of the ideal, *i.e.* within the world as ideal representation. *Extension* is in no way the opposite to *idea*, but lies wholly within it. We represent things to ourselves as extended, and, so far as they are extended, they are ONLY our representation; but whether, independent of our representation, anything is extended,—nay, anything at all *exists*,—that is the question, that the original problem. The true opposite to ideal representation is not *extension*, but, as Kant said, *thing of itself* (*Ding an Sich*), which Schopenhauer has delegated to the *will*.

The world is not divided into the two elements of that which is mentally represented and that which is *extended*, but into the mentally represented on the one side and the essentially existent on the other, or into the ideal and the real (the phenomenal and essential), so that the fundamental question of all philosophy is to define the relation

of these two to each other. Spinoza, starting from Descartes and his dualism of *substantia cogitans* and *substantia extensa*, only attempted to solve this Cartesian problem. But as the two opposed terms lie wholly within the region of idea, the separation line between the ideal and the real, as drawn by Spinoza, falls wholly within the ideal side, and thus he remains always planted within the world of idea. This world, so far as distinguished by the form of extension, he takes for the real, the *Ding an Sich*. Consequently, he is perfectly right when he says that that which is extended, and that which is ideally represented (that is, our idea of bodies and the bodies themselves), are one and the same; for, most assuredly, things are only extended as conceived by us, and they can only be conceived by us as extended. The world as ideal representation and the world of space are one and the same thing; this we can entirely admit. If, then, extension were an attribute of the thing itself, our perception would be equivalent to a knowledge of things in themselves; and so Spinoza takes it, and herein consists his realism. But, inasmuch as he does not go to the foundation, and does not show that there is a real world of space *independent* of our perception answering to the world of our perceptions, the fundamental problem remains unsolved.

After mind and matter, thought and extension, were once accepted by Descartes as fundamentally and essentially different and independent substances, one may well wonder how these two opposed substances, which have nothing whatever in common, could nevertheless continue to form a unity, and act upon each other mutually as soul and body. Men split their heads, in fact, over this wonderful combination, and called in *den lieben Gott* to their help, who was bound to intervene in the question, in order to make the body act on the soul, matter on mind, and the one upon the other. They invented the system of occasional causes (Malebranche) and of pre-established harmony (Leibnitz), or, with Spinoza, they dissolved mind and matter as two attributes into the one infinite substance.

All this might have been spared if they had seen that the opposition between body and soul, or matter and mind,

is only a special and particular expression of the universal contrast between matter and force, and that this does not indicate at all two different and independent *substances*, but only two *modes* by which the perceiving subject apprehends the object, consequently two modes of mental representation.

Speaking generally, every attribute which we affix to a thing, every predicate which we give to it, only expresses the mode in which the thing works and reflects itself upon our faculties; for every kind of predicate, therefore, there must be a particular function in the perceiving subject. Coloured objects we apprehend by the sight, resounding objects by the hearing; if we were blind and deaf, we should know nothing of colour and sound. Just so must it be with every other distinction which we make in objects. If we distinguish things as material and immaterial,—extended, divisible, occupying space, or unextended, undivisible, not occupying space,—there are really only *two distinctions* which we attribute to things in virtue of two different functions of the knowing faculty, and not by any means two heterogeneous, self-maintaining substances independent of our modes of apprehension.

Everything can be apprehended by us from a twofold point of view,—as material or immaterial, bodily or mental, —according as we regard it with the space faculty (to which everything appears extended and divisible) or with the understanding, which lays at the foundation of everything extended an invisible and simple *power*. And these two modes of apprehension cannot be separated; but we are constrained to conceive a power at the basis of every object of extension, and to *think* everything which is perceived by us as *material*, inwardly as *immaterial*. Matter and force, therefore, are inseparable. In every material object there is working an immaterial *power*, and every power in its turn appears outwardly as extended matter, from the bare, unorganized stone, in which gravitation alone works, up to the organized brain, the seat of reflection and judgment.

The question, How can body and soul hang together? how come matter and mind to make *one whole*, each acting on the other? is therefore at the bottom nothing but the

question, How do we come to *represent to ourselves* one and the same thing in two different ways? It is consequently only the question as to the connection of two different modes of apprehension.

Materialists and spiritualists alike, without suspecting it, explain the world from what is, in fact, only a mode of apprehending it by the perceiving subject. They are both, therefore, without knowing it, *uncritical realists*, inasmuch as they take the bare perception for the thing itself. 'In truth,' says Schopenhauer, 'there is no such thing as either mind or matter, but plenty of nonsense and many fanciful chimeras in the world.' The pressure of gravitation in the stone is just as inexplicable as thought in the human brain, and on the same principle might lead us to conclude that there is a *mind* in the stone. So soon as ever, even in mechanics, we get beyond what is purely mathematical, so soon as ever we come to impenetrability, gravitation, solidity, or fluidity, we meet with expressions which are just as mysterious in their nature as thinking and willing—*i.e.*, we meet with *the inexplicable*, for such is every power of nature. Where is now that 'matter' which you know and understand so intimately that you want to explain everything by it? The mathematical element alone is purely comprehensible, because it is rooted in the subject, *i.e.* in our own perceptive faculty; but the moment anything strictly objective comes up, anything that cannot be determined *à priori*, this we find in the last instance to be wholly inexplicable. What the senses and the understanding *perceive* is merely a superficial phenomenon, which leaves the true and inner essence of things untouched. This was Kant's view. Now, if you imagine a mind to exist in the human head as a sort of *Deus ex machina*, you must, as I said, admit the same to exist in every stone. On the other hand, if you admit that dead and passive matter can exert a power like gravitation, or attract like electricity, can repel or strike fire, so also may your brain think. In short, to every mind we may attribute matter; but then, also, to every particle of matter we may attribute mind. The net result is, that the whole conception, the whole opposition between mind and matter, is false.

It is no little merit in Schopenhauer to have laid bare the falsehood of the Cartesian dualism, which is always cropping up to this day in philosophy, even in the natural sciences, and in that way to have made an end once for all of the senseless question of the relation of mind and matter, and specially of body and soul, by showing that such an opposition really does not exist, but that everything, without distinction, presents (for our perceptions) both a bodily and a mental side, according as we regard it with our innate space-perceiving faculty, or our equally innate understanding, which refers everything extended to an inward operating power; from which it follows, that materialism as well as spiritualism seeks to deduce the world from that which is not an original self-existent element at all, but merely a secondary one—namely, mere ideal representation.

In this refutation of the strife between materialism and spiritualism, Kant had certainly prepared the way for Schopenhauer. But if we consider how lightly the post-Kantian philosophers have let go the point thus gained, and how their whole speculation turns upon the question as to the relation of mind and matter,—a relation which Kant had virtually done away with,—so that on the one side they deduce the world wholly from matter, and on the other side wholly from mind, while there are others who, like Spinoza, hold the absolute ideality of both,—I say, if we consider this, we must acknowledge the merit of Schopenhauer in having turned our thoughts again into the Kantian pathway, and for the second time brought to consciousness the true problem, which consists not in showing the connection between mind and matter, but the connection of the whole world as ideal representation with things in their essential existence, and wholly independent of perception and its forms.

So far Frauenstädt, who has succeeded, I think, in defining Schopenhauer's relation to the other philosophies of his day with adequate clearness. There is no longer a contrast, as he truly says, between mind and matter, between soul and body. The line of division is drawn in the wrong place; the contrast is between the world of phenomena and

the world of reality, the world we perceive and the *Ding an Sich* which hides itself beneath our perceptions. But now the question comes, What is this *Ding an Sich?* what is this essential existence, which some have termed *monad*, some *noumenon*, some *the me*, some *the absolute*, some *God?* Schopenhauer's answer is quite ready; it is *the will. The world of phenomena is ideal representation; the world of reality is will.* This is the summary of his whole philosophy. The term will, however, must be taken in a wide sense, including every case in which power is exerted with an end or purpose. Within the region of consciousness, this is obvious enough. We exert a conscious power almost every moment of our existence, and we call it *will*. The will is the ground or mainspring of all our actions, and everything, therefore, which is the produce of our activity may be regarded as the embodiment of that will in the outward or phenomenal world. A builder conceives a structure in his mind, or an engineer a machine. So long as *the idea* only exists, there is, indeed, the whole thing before him in a mental representation, but not as a reality, a *Ding an Sich*. But let his *will* come into operation, let him actualize his idea by voluntary effort, and the building or the machine soon has an independent existence. The building or machine, then, may be truly said to consist of two elements —the produce of idea, and the produce of will. The idea element is the phenomenon, the will element is the reality. Carry on this illustration into the region of unconsciousness. What are our bodies but structures formed of the same two elements as those above indicated? There is a vital power acting in their whole formation; every cell, every tissue, every organ is the work of this power, which is the will in its unconscious energy. In the vegetable world the same analogy holds good. The structure of every plant is owing to the operation of a power working to a purpose—that is, to a will; and even the inorganic universe itself is the product of *will*, as every atom and every stone manifests a power which assigns it its place in the whole creation. The whole world, therefore, is phenomenon and reality, idea and will; this is the final solution of the question of idealism and realism.

Let me take one other passage from Frauenstädt, in which he gives a brief summary of Schopenhauer's doctrine, and by which the above explanation may be tested:—'The fundamental thought of Schopenhauer's doctrine is this, that the *thing* which Kant puts in contrast to mere phenomenon as *Ding an Sich*, and held to be absolutely unknowable,—this substratum of all phenomena, consequently of all nature,—is no other than that well-known and perfectly familiar entity which we find within us as *will*. Consequently this *will*, so far from being inseparable from knowledge, as all former philosophers have believed, or a mere result of the same, is fundamentally different from and wholly independent of knowledge, which in fact is secondary to it, and of posterior origin. The will, accordingly, can exist and manifest itself without consciousness; which really happens in the entire region of nature from the animal downwards. Nay, this *will*, as being the only thing essentially existent, the only thing truly real, original, and metaphysical in a world where all else is only phenomenon (that is, ideal representation), gives to everything the power by virtue of which it can outwardly exist and work. Consequently not merely the spontaneous actions of animals, but also the organic impulse of their living organisms, as well as the form and structure of the same; nay, still further, the vegetation of plants and every primitive power (such as crystallization) in the unorganized world manifesting itself in physical and chemical phenomena; nay, even gravitation itself, regarded *per se* and apart from mere phenomena, is precisely identical with that which we find in ourselves as *will*, of which will we have the most immediate and intimate knowledge possible. Further, the particular expressions of this will are set into action, in the case of conscious beings, by motives; but no less in the organic life of animals and plants by nervous impulses, and in the case of inorganic things by *causes* in the strictest sense of the word. On the contrary, knowledge, and its substratum the intellect, is a phenomenon wholly different from will, merely secondary to it, and only accompanying the higher stages of the will's objectivity; consequently is unessential to it, independent of its manifestation in animal organisms, and

in its nature physical rather than metaphysical. From the absence of consciousness, therefore, in any case, we can never conclude on the absence of will; so far from that, will may be known as present in all the manifestations of unconscious as well as vegetable and inorganic nature. In a word, will is not conditioned by knowledge (as philosophers have before held), but knowledge by will.'

On the basis of this speculative view regarding the nature of intelligence and will, Schopenhauer builds a system of ethics as novel as it is ingenious. Intelligence is the principle of individuality; will, the principle of unity and identity. The basis of virtue is the recognition of this unity of will in all living beings. To maintain one's own will in opposition to all other existence around us, is *egoism*, the principle of evil; to apprehend and act on the great truth that all existence is *will*, and all will is *one*, is the foundation of virtue. This is expressed outwardly by what we term *sympathy*, which is, therefore, the *primary impulse* to all good action. The highest good is only to be found in the entire *renunciation* of the individual will, and its complete sacrifice to the good of all. Then only is the true freedom of the will wholly realized.

Closely connected with Schopenhauer, and belonging to the same order of philosophical speculation, though of a far more recent date, is the work of E. von Hartman, entitled, *The Philosophy of the Unconscious* (*Philosophie des Unbewussten*), published in 1869. Although the material with which Hartman deals is very similar to that of Schopenhauer, and many of his conclusions are very nearly the same, yet the whole tone and method of the book shows a more recent origin, and a greater affinity with the thought of the present. Schopenhauer from the beginning is prosecuting his research for the real—the *Ding an Sich*—and finds its essence in the will. Hartman takes no pains to find this chimera of the early part of the nineteenth century; he takes the phenomena of the world as he finds them, and pursues his research by the now established methods of induction. He begins, accordingly, by marshalling *facts*, not by announcing general conclusions, which the philo-

sophy of induction shows can only be arrived at gradually at the close of our whole investigation.

And the facts relating to the unconscious principle in nature and mind are not far to seek; they have been noted and dwelt upon, more or less, by modern philosophers of almost every school of thought. Leibnitz in his time observed that there are monads which operate by virtue of an inherent principle of intelligence without *consciousness;* and in his psychological remarks, he shows clearly enough that the fact of the soul not being conscious of its thoughts is no proof that it has ceased to *think.* Kant contrasts dim perceptions with clear ones, and says that, regarding the whole map of the human consciousness, only a small portion can be illuminated *at once.* Schelling brought forward prominently in his philosophy the principle of unconscious intelligence, and spoke of it as the *root* out of which all conscious intelligence springs. But without citing any further the views of mere speculative thinkers, we may find the same facts of unconscious mental activity brought to view by several of the purely inductive investigators of our own country. This line of research was begun by Dr. Marshall Hall, and ended (in his case) by the complete establishment of the physiological doctrine of reflex action, by virtue of which nervous activity is produced and perfectly adapted to subserve important purposes in the bodily functions, the whole process lying completely within the region of the unconscious. To this doctrine of reflex action, termed excito-motor, Dr. Carpenter added that of sensori-motor action, or action produced and guided by *sensations* without any further intellectual effort or any volitional control. Lastly appeared the still more important fact that there is also such a thing as *reflex action of brain,* in which emotions, ideas, purposes, speech, and determinate actions are all produced by the agency of cerebral action, while the subject of them may be wholly unconscious of the entire process and result. To this physiological fact, a vast number of the phenomena of somnambulism, mesmerism, table-turning, planchette writing, and so-called spiritualism have been correctly traced, the spiritual agency being in most cases simply the spirit of the *individual* working

unconsciously, and thus naturally enough referred to some spiritual agency *beyond*. Cases of unconscious mental action are being multiplied every day; but it has been reserved for the writer we are now considering to build upon these facts a whole system of philosophy and an entire theory of the universe.

Hartman divides his inquiry into three parts. In the first part he treats of the phenomena of the unconscious in our physical constitution; in the second he treats of the unconscious in connection with *mind;* and in the third he shows the genesis of consciousness out of the unconscious, and draws general philosophical conclusions from the whole inquiry. The unconscious will shows itself first of all in connection with the functions of the spinal marrow and the ganglia. It is known by comparative physiology that many of the lower animals develope from their ganglia an independent source of action. Frogs will hop after decapitation, and hens will put their heads under their wings and clean their feathers after the brain has been removed. By analogy, Hartman concludes that a similar independent *will* resides in the human ganglia, and that this will is a manifestation of the unconscious.

Instinct is another phenomenon which is treated under this section. It forms, according to Hartman, the innermost pulse of our whole being. The aim and purpose of instinctive actions are wholly unconscious to the individual; and yet it exhibits the most perfect adaptation of means to an end. Upon the power of instinct depends the entire preservation of the individual, and the continuation of the race; so that the whole existence of animal and organic life depends upon a complication of activities, wholly involuntary and wholly unconscious.

Not only is the continuance of organic life, however, due to the power of the unconscious; the whole structure of the organic frame is due to the same. There exists in connection with our physical constitution an unseen power usually termed vital force. This power, though unseen, we know well by its effects. When it is strong within us, then life is abundant and health is vigorous. Injury and disease yield at once to its influence. It gives vigour to the limbs,

lightness to the spirits, energy to the frame. It is this same unconscious force which carries on the process of cell-formation in the structure of the human frame, which produces all the normal changes in the tissues, pervades the blood in its circulation through the body, and aids the necessary processes of nutrition, absorption, and assimilation.

Passing on to the power of the unconscious in relation to *mind*, we are confronted with a vast series of phenomena of the most interesting kind. Some of these phenomena are abnormal, as seen in that entire class of involuntary action, thought, and expression which begins in somnambulism, and passes through the different stages of manifestation known as mesmerism, clairvoyance, and electro-biology. But there are normal as well as abnormal developments of the unconscious in connection with mind. Genius is unconscious. *Poeta nascitur non fit.* Artistic power comes as an inspiration from heaven. The productive imagination paints its glowing imagery by no rules; and no one can tell when, whence, or how the afflatus comes upon us, for it rises up from the region of unconsciousness and descends there again when its work is over. Even in ordinary thinking there is a large element which comes out of the world of unconsciousness. The very links of association which bind our ideas together are woven in the dark, and the highest glimpses of philosophical generalization come upon us when they are least expected; so it is with the emotions. Hartman dwells especially upon the phenomena of *love* as a revelation of the unconscious, and shows how, with all the sorrow, anguish, and disappointment which comes in its train, it goes on victoriously providing for the continuance of the race and the well-being of offspring, even contrary to all our thoughts and calculations for the future of our own peace and happiness.

No philosophical writings have been so much read and so much disputed over in Germany, during the last ten years, as those of Schopenhauer and Hartman. This has arisen mainly from two causes—first, the attractiveness and pungency of the style, contrasting so greatly with the dry scholasticism and abstract technology of the larger portion

of the other philosophical works of that country; and secondly, the method of inquiry, basing itself as it does largely upon facts, and appealing to facts for its verification.

Both Schopenhauer and Hartman purpose to crown their investigations with a philosophy of the universe, and we must hint briefly at the complexion which that philosophy assumes. Kant, as we saw, rejected all the evidences which the pure reason has to offer for the existence of a personal God as the creator and sustainer of all things; but he reinstated that belief as a practical axiom lying at the basis of our moral constitution. Schopenhauer parts from Kant altogether in his ethical ideas; he rejects the categoric imperative, and reproaches him with borrowing his whole moral system from the ten commandments. Nothing therefore remains but to deny the personality of God altogether. But having done this, can he not take refuge in pantheism, as so many of the other German idealists have done? By no means. The universe presents too uniform an aspect of confusion, disorder, suffering, and despair for us to imagine for a moment that it is the embodiment or expression of an infinitely wise, holy, and beneficent being. 'Evidently,' he writes, 'it must be an ill-advised God who does not understand how to give Himself any better recreation than to embody Himself in a world like this,—a world so hungry and wretched,—and there, in the form of numberless millions of living but miserable beings, who can only exist at all by preying on one another, to suffer sorrow and death without measure and without purpose; or in the form of six million of negro slaves, to endure daily on the average sixty million stripes upon the bare body; or in the form of three million European weavers, to vegetate, hungry and wretched, in dark chambers and sorrowful manufactories. That were indeed a recreation for a God who must have been accustomed otherwise to something better! Surely the great progress which is imagined by some to be made, in passing from theism to pantheism, if looked at earnestly, and not as a bare negation, is merely a progress from what is undemonstrated to what is *purely absurd.*'

Theism and pantheism, then, being both rejected, what have

Messieurs Schopenhauer and Hartman to put in their place? The former replies, *Will*—will taken not in a narrow and individual, but in a broad and general sense. Will is power, will is life, will is matter, will is God, will is the whole universe so far as it is *not* phenomenal. But, unfortunately, will is *blind*, will is without intelligence or consciousness, will is stupid and groping, and so the world, which it forms, presents an aspect of disorder and misery that only increases in proportion as *will* asserts itself, and can only be ameliorated by ascetic self-renunciation and the quietism of perfect indifference. Schopenhauer, in a word, is a pessimist of the first order. In his view, the world is too bad for us to regard it as governed by an intelligent or a beneficent being; and we can only fall back upon some first principle which has all the dimness and helplessness of the human will, when unilluminated by reason and unguided by conscience.

Hartman's 'first principle' is still more indefinite, namely the unconscious; and if you inquire further what is the unconscious as applied to the world at large, rather than to the individual, the only answer we obtain is, that it is the *Alleinigkeit* ('the Absolute One'). In his views of life Hartman vies with Schopenhauer in drawing it after the most approved pessimist model; and the practical result of the whole inquiry is this, that as human life is a failure, and must ever present a scene of hopeless illusion and misery, the development of intelligence in the race ought to lead to a wise determination amongst all nations and peoples to cut it short by willing and determining its non-continuance. Thus the *Alleinigkeit*, on which the system rests, will find a method of *happy despatch*, and end, as all atheistic systems must do, in nihilism.

So far, then, we have been considering the first attempts made to mediate between the conflicting systems of idealism and realism, based upon the principle of *monism*. We have next to notice another series of attempts to do *the same*, based upon the atomic theory. Many writers have attempted to follow along this pathway of speculation since Leibnitz led the way by his theory of *monodologie*. Even Kant in the earlier stages of his career favoured the atomic

view of nature, but returned afterwards, as far as he ventured at all to trench on this question, to the principle of monism. Herbart, as we saw, utterly set aside the whole idea of one absolute substance, and affirmed that we are bound to admit as many distinct existences as there are distinct phenomena. Meantime the progress of natural philosophy, and particularly chemistry, has gradually brought the atomistic view of matter and force once more into vogue; and accordingly we find now in Germany a school of philosophical writers who, starting from the standpoint of natural science, have aimed at basing an entire philosophy of the universe upon the atomic theory. Those who stand out most prominently in this direction are Herman Lotze, author of the *Mikrokosmos*, and G. F. Fechner, the celebrated psycho-physicist. The great merit of Lotze is his attempt to unite in one comprehensive view the mechanical and atomistic view of nature on the one side, with the spiritual and ethical on the other. He maintains the atomic theory of material existence as the best explanation of the phenomena of nature on purely experimental grounds, and explains the organic *working* of nature on mechanical principles—that is to say, he rejects all theories of a *vital* force, and shows that there is a harmony of powers in the world, by virtue of which every single thing acts upon every other, a great and divine plan, according to which the world is formed, carried on, and sustained.

With regard to the question of soul and body, Lotze does not deny but that in some higher sphere of thought the difference between the merely organic and the self-conscious may disappear; but to our present and plain apprehensions, the difference of the two is so defined that it must be accepted as part of any intelligible exposition of the phenomena around us.

The mechanical view of nature with which we are to explain the working of individual organisms, must be completed, according to Lotze, by a moral and teleological view of the universe as a whole. The laws by which all nature works, though mechanical in their individual aspect, yet reveal one great plan and purpose that can only emanate from an infinite mind who shapes the whole to one

intelligent end. Thus, in the hands of its later exponents, the atomic theory is made the ground of a complete conception of nature, which leads us up to one divine and infinite personality, on whose power and intelligence it absolutely depends.

The real apostle of the atomistic theory, however, is Gustav Theodor Fechner, the author of the *Elements of Psychophysik*, and more recently of a remarkable treatise, *Ueber die physikalische und philosophische Atomenlehre.*

The first and larger portion of this treatise is taken up with the atomic theory as the basis of a system of *natural science;* the latter portion includes the bearing of that theory upon the wider questions of philosophy. The advocates of the atomic theory, from Leibnitz downwards, have regarded each atom, or monad, as possessing an independent power, and have identified the monad in its primary form as being the basis alike of all material and mental existence. Not that a soul with consciousness like our own is attributed to each monad, for some may be naturally incapable of rising to this height, or may not yet have realized the conditions of doing so; but yet the corporeal monad and soul monad are regarded as being of the *same nature*, so that the world of mind and matter are identified at their root. Many weighty reasons exist for maintaining this view of the atomic doctrine, as it clears away numberless difficulties and bridges over the great gulf between the conscious and the unconscious. Fechner, however, has given quite another complexion to the atomic theory. He does not deny a psychic force to the monad altogether, but explains it as existing *not in the simple monad*, but as the last and highest result of a complete atomic *system*, which in its exterior manifestation produces the body, and in its interior manifestation the soul.

This view of the atomic theory, says Fechner, agrees with the ordinary monodological theory, inasmuch as it bases the world both of body and mind upon the same simple and separate atoms, and thus shows even the *body* to be a system, which on the side of its *inner* manifestation is essentially spiritual, while it only becomes material in its outer manifestations. This view of the question, accord-

ingly, stands in the same opposition as the other phases of the atomistic theory to the dualistic, the materialistic, and most forms of the idealistic philosophy. It is distinguished, however, from the ordinary monodologie, inasmuch as, in place of connecting a psychical unity with *each atom*, and thus making as many souls (conscious or unconscious) as there are separate atoms, it connects psychical unity in the last and highest instance with the whole atomic system of the universe (God), and subordinate psychical unities (human and animal souls) with the subordinate parts of the whole system. In this way an entirely different conception arises, both as to the relation of soul and body, and also as to the universe at large.

In a broad sense the whole body may be regarded as inspired with soul, in so far as all its parts and activities, becoming complete by virtue of their mutual connection, and capable to a certain degree of taking each other's place, contribute to the power of self-manifestation. A real self-consciousness, therefore, is not to be attributed to the *nature* of the atoms themselves, but is only linked on to their united *normal activity*.

In a word, Fechner, while regarding the *monad* as the real basis of all mental and material existence, considers the phenomena of mind and matter alike as flowing not from any intrinsic force or faculty which each possesses, but from the fixed laws of their mutual co-operation.

There is yet one other phase of philosophical thought in Germany (and that perhaps the most prominent at the present moment) which is represented by the *Journal of Philosophy and Philosophical Criticism*, edited by Fichte the younger (lately deceased), Ulrici of Halle, and Wirth (Protestant clergyman in Winnenden). The whole tone of this journal is thoroughly theistic, whilst it apprehends both metaphysics and psychology from a predominantly experimental point of view.

Immanuel Herman Fichte, the son of the celebrated idealist, has had a long career (only just closed) of philosophical activity, and deserves a wider reputation than has actually fallen to his lot. In an interesting monogram written some years ago, termed *Die Seelen-frage*, he has

given us a brief personal sketch of his own mental life and growth, which is important as showing the progress of a mind through the speculative phases of modern German thought, and the tendency of those, even most deeply imbued with the spirit of mere abstract research, to break out into the more open daylight of experimental philosophy.

'In my early years,' writes Fichte, 'while yet on the threshold of youth, I enjoyed the great happiness of possessing in both my parents (ever the objects of my highest veneration) an example and an experience which shaped my whole future life. *The fact* of a life spent in the world above sense, fraught with high and world-conquering powers, which gave indomitable courage in life, and the highest resignation in death—all this came before me in the most imposing form, at once inspiring and rousing to further contemplation. That picture of a "Life in God," in which I was allowed to take part, though, as it were, from a distance, has never forsaken me; it was to me the summit and crown of existence, to which every earnest mind might attain, and at the same time the key to the comprehension of my father's philosophy both in its Scholastic form and its deeper meaning. In my father's *Wissenschaftlehre*, in his *Way to a Blessed Life*, in the lectures he delivered in 1812 on morals, the scientific interpretation of his life itself came before me with the greatest power. Kant's doctrine, also, of the *Homonoumenon* had an imperishable effect upon me, since the very soberest of all thinkers there showed that he could not draw himself away from the power of that great fact by which, as he expresses it, man is placed in the midst of a supersensual order of things. My half-philological studies of Plotinus and the Neo-platonics brought me now in connection with *theosophy*, while the love which my mother bore to the Christian mystics also introduced me into another rich world of mental experience.

'Here I must observe, that at this time (*i.e.* soon after the commencement of the present century) the sentimental theism of Jacobi predominated in the theological world, especially in the form in which Fries presented it—mixed up, that is to say, with a considerable element of Kantism. Amongst the younger philosophical thinkers, Oken's *Natural*

Philosophy exercised a great influence, especially as in his *Isis* he had infused into his system a bold political tone. He stood as the chief representative of the then reigning *Natur-philosophie.* The originator of this school, I mean Schelling, was no longer active; Hegel was scarcely known; while Schleiermacher and Steffens exercised a good deal of power, but within more limited circles. It is not to be denied, indeed, that his (Oken's) independent style of thought and the bold decision of his philosophical speculations were naturally calculated to impose upon the youth of that age. Although many of his political sayings compelled a tumultuous approbation, yet his philosophical dogmas made a bad, and sometimes even a comic, impression upon me, on account of their unmeasured but empty pretensions. One might admit a certain *appearance* of logical connection in his idea of God as the zero out of which every finite existence springs, and into whose abyss it must return, and of nature as the eternal producer without beginning and end; yet the whole was mere scaffoldings of empty forms wherewith to cover the insolubility of the problems, for which his more successful scientific views could not compensate. We will not at present call up the ghosts of old controversies; still it may not be useless here to notice with what poverty-stricken husks, both on the one and the other side, the aspiring youth of that time was nourished; and on this ground, at least, we may admit the great merit of Hegel, who, to say the least, put an end to this solemn trifling.

'Under these circumstances, I betook myself to the prime originator of this whole philosophical method; I mean, to Spinoza. But here I found, in the main, the same defects. To his doctrine of absolute necessity, which drew everything into a chain of fixed consequences and destroyed all purpose and all freedom, I opposed the grand objection of Leibnitz, that this doctrine does not at all answer to the real constitution of the world,—which constitution bears plainly upon it the stamp of a whole system of means and ends, worked out according to the laws of intelligence and order,—and that it is the notion of a relative, a moral, and an intelligent necessity which can alone answer to the facts of the case. How much that is grand and beautiful Leib-

nitz drew from this simple and convincing thought is well known. I gave myself, therefore, next, and that diligently, to the study of this great thinker, then, strange to say, almost forgotten and despised.

'But even in Spinoza's doctrine the profound idea of an *amor intellectualis Dei*, the crowning-stone of the whole building, appeared to me to give the lie to his first principles rather than confirm them, inasmuch as it threatened to pull down, at last, the blank conception of the impersonality of God and the unsubstantiality of the human soul. In this idea I found those great ethical and religious facts *again* making their appearance, and that in their purest and happiest form. Love is a feeling so rich, and which presupposes such a fulness of complete personality, that it becomes an unintelligible paradox to attribute it to an abstract and impersonal substance, or to affirm that the unsubstantial and finite *modes* of the absolute thought (for the human soul in this system is nothing more) could possibly be the possessors of such a feeling.

'Such are the philosophical caricatures which must always be produced if we undertake to force the rich fulness of life itself into the limits of incompetent theories. Such theories cannot really be completed even in thought, still less can they satisfy the human curiosity as being an exhaustive explanation of the facts themselves.

'My own education, which had ever impelled me to some definite results, had early protected me from the prejudice of imagining that there could be any particular depth or extraordinary wisdom in such nebulous propositions. I set all such suspicious pretensions to depth of thought on one side, and have found abundantly since then the value of such a course in the study of Schelling and Hegel.

'Still the question ever returned, *where* the central idea was to be found by means of which it was possible to get beyond the whole circle of these doctrines, and that, too, on scientific grounds. And here I must acknowledge thankfully what I owe to the influence of Heinrich Steffens. I found in him the same causes of dissatisfaction with the reigning philosophy, a similar struggle to throw off the yoke

of abstract ideas, and the same impulse to solve the problem of the world as well as the soul out of the fulness of nature and the life of history. To him I owe it, next to Kant, Fichte, and Leibnitz, that my attention was directed to the right and complete idea of man as based upon *experience.* I refer on this point particularly to his *Anthropology*, which we must regard as his chief work. Man is, according to him, a being standing within the limits of nature, and yet above nature. He is a being, too, possessing perfect individuality, because the individual element does not find its primary ground simply in organic differences, but in the intellectual and moral constitution of the soul.

'The doctrine of individual *genius*, in a word, was first sketched out by Steffens, and regarded by him as affecting the whole character of psychology. This doctrine was hinted at in Schelling's *Treatise on Freedom*, but without being distinguished from the opposite view with any degree of clearness. In Hegel's philosophy the whole idea was *suppressed*, inasmuch as he took the whole groundwork of genius out of the sphere of the human and raised it into the region of absolute reason.

'Around this cardinal point the whole of our present philosophy turns as on a pivot; and upon the correct interpretation of it depends not only the much-needed reconciliation between faith and knowledge, but even the solution of social questions and the great problem of the future.

'It will now be sufficiently evident why the idea of creation has always stood, to me at least, in the second degree of importance—nay, why every theological cosmogony can possess but a very equivocal worth in my eyes. Schooled in the spirit of the Kantian philosophy, I have become deeply convinced that we can learn *nothing whatever* respecting these questions by any *à priori* procedure, or from any inner laws of reason, and that we must pursue the more modest pathway of drawing a hypothetical conclusion concerning the nature and operations of the universe from facts which lie open to our observation. It is quite competent for us, however, in the spirit of the Kantian philosophy, to give to the human soul, with its inward

experience, the first and most important place amongst all the facts of this nature. But it is ever necessary to insist upon clearness and logical consecutiveness in regard to these relations. The idea of our being able to deduce any process of cosmogony from a central theological standpoint is purely delusive; so that absolutely nothing which depends upon these suppositions, or is deduced from these premises, can be reckoned as the result of a true philosophy, but only as a misty deceptive *gnosis*, which has ever been the mother of destructive errors, just because it is only the appearance of science, and not science itself. However deep or expansive philosophy may become, this necessary limit, and the consciousness of it, must never be lost sight of.

'Starting, then, from the positive facts of nature and the human soul, God no longer appears in our philosophy as a mere cosmical principle, nor a mind and personality *absolutely* considered, but as a being who manifests essentially the purest qualities of personality, a being holy and beneficent. Nor can the most inconsiderate thinker detect here the slightest approach to anthropomorphism, inasmuch as he will be met by the reflection that the divine operation in man is seen exactly in this fact, that he possesses in his breast a spark of that holy feeling by means of which the obduracy of his own selfishness is so melted as to evince the superhuman power of the influence that operates within him.

'The idea of creation presents itself quite in a new light when once brought into connection with these views. It is no single problem standing on a level with many others, but it summons the whole bent of speculative theology to throw light upon it, and to bear a united testimony to the existence of one supreme personality. This testimony is forced upon us by the necessity of admitting in the universal order and connection of things intelligent agencies as their basis, and by the manifestation, which we have on every side, of divine beneficence in all the *finite* arrangements of the world. When, therefore, all the various crude theories of God and the world have one by one disappeared under the evidence of this one great idea, then the aim of the whole comes more clearly than ever to view—that, namely,

of exhibiting to us both a *creator* and a *creation* in the true and genuine sense, and of showing us that there is a perfectly free relationship established between them, which is known and witnessed not by means of uncertain and shadowy theories, but by the living converse of the divine and the human spirit in the depths of the human consciousness.

The philosophy we profess is not ashamed to confess that within this whole sphere of inquiry it can lay no claim to absolute mathematical certitude, just because the *material* of inquiry goes beyond the region of formal or logical necessity, and contains a specific reality, which in *its facts* can only be investigated experimentally, and only explained hypothetically in its inner *causes*. Here, as in the experimental sciences, speculation can only draw *probable* conclusions, and frame hypotheses in the way of induction and analogy. In these hypotheses, too, we ever take into account the exact degree of inward probability, and endeavour definitely to fix the exact gradation of certainty which we can give to our deductions.

If, then, the problem of our philosophy in this first respect, both as to matter and form, is strictly limited, yet it has, on the other hand, in reference to its endless details, a most unlimited sphere of action. It divides itself into a series of special investigations, which uniformly aim more and more at a general result, and which for this very reason do not exclude, nay, rather expressly include, one leading fundamental thought—a thought which can never be said to be fully exhausted, because the material bearing upon it is of infinite extent. Philosophy as universal science can never be *completed*, though as *ontology* it may be brought to a termination; and as metaphysics it has even now probably reached its highest point, just because the interest of the subject has always turned the human mind to the great question of the possible proof for the existence of a God.

I need hardly say how certain it is that speculation, when once released from the shackles of false methods and prejudices, must start on a new career; while, at the same time, it turns back again to that free method of investigation

which was followed by all great thinkers, such as Leibnitz, Lock, Hume, and Kant,—men who, though differing in their results, yet all display an intellectual relationship in this one respect, that they do not start from these *à priori* opinions and formulas, but from the induction and determination of individual facts.

We may here notice that, inseparably connected with this theistic view, is the faith in a divine providence; and that not in the sense of a mere superintendence of those general laws which lie at the basis of the stability of nature and the historic life of man, but more expressly in the sense of a holy and benevolent superintendence of human destiny, in relation to the individual affairs of each separate person. This conviction is so surely the goal of theism, the ripest and most refreshing fruit of its whole course of thought, that it were vain to attempt to separate the one from the other, or abate the least particle of its force and meaning.

This doctrine cannot either be regarded, in any degree whatever, as the mere expression of a childish faith, or of an undefined wish, which further investigation shows to be groundless; but we are compelled to acknowledge that, however strange it may appear to many brought up in the philosophical abstractions of the day, the idea of a special providence is the *necessary consequence* of the more general notion of a historical providence, and must stand or fall with it. In the province of history there is nothing specially great or small; it is only our inclination and partiality which makes it either the one or the other; the great and the universal can only represent the unity of the whole plan of the world, in so far as *the particular*, in whose complications it is really involved, completely answers to it. If, therefore, there is an order in the universe (for which all the facts of nature are a guarantee), the *particular* must form part and parcel of it. It is providence in the smallest parts which alone can make good the whole. History, considered outwardly and empirically, is no other than the sum of those small events in which the general plan fulfils itself; accordingly, even those minute arrangements which often depend apparently upon our arbitrary actions or non-actions, must

really be governed by this universal superintending power, without our being able to comprehend the nature of the superintendence, or needing any experimental certainty of it.

This fact, therefore, stands sure. The possibility of an individual providence in history must be assured before we can trust the idea of a universal one, not the reverse; for without the former, the latter would remain unreal and abstract—*i.e.*, the particular, in which the very essence of history consists, must be abandoned to chance or caprice. Such a mere general providence we see actually existing within the kingdom of nature; and, on account of its generality, we hesitate to term it providence in a peculiar sense. In nature we find the *general* connection of things arranged in the most definite way, and all the co-operating conditions reckoned on in the most wonderful manner, but still only for the *general* result. This is done in the inorganic world in order to preserve the equilibrium between the universal powers of nature, and in the organic world in order to preserve the genera and species, whilst the *individual* appears left indifferently to chance. At any rate, we do not find, in the arrangements of nature, any trace of special care for the individual. But for this very reason the case must be altogether different with man and his history; for, as has been shown on all hands, the individual holds precisely the same place in the world of mind which in the world of nature is allotted to the *species*. On that account the law of his life is a higher one. He exists as such only *once*; and the idea according to which he is planned is not scattered, as in the animal, in numberless exemplars over the whole surface of nature. For the same reason also, and just because *new* minds are ever appearing, it is in the power of man to weave the web of history; for history brings forward continually *what is new*, and thus breaks in upon what would be otherwise the uniform course of nature. According to this conclusion, the human individual may console itself with this most bold and sublime, but yet most healing faith, that there watches over him a most special providence; *that he stands as an individual before the Eternal Eye, and is received as a personality*

into that same consciousness which embraces and orders all things.

So far Fichte. Ulrici is *par excellence* the *critic* of the school. With less imagination than Fichte possessed, and far less tendency to a spiritualistic mysticism, he has developed in his books, as well as in his contributions to the *Journal*, a critical faculty surpassed by no writer of the present day. The two principal works on which his reputation as a philosopher rests are entitled respectively, *Gott und die Natur* and *Gott und der Mensch.* Well read in the elements of natural philosophy and physiology, Ulrici has been able to approach all the great metaphysical questions regarding the world, the human mind, and the Creator, from an experimental point of view. So far, however, from adopting the platform of positivism, he shows how we are compelled, by the most rigid and consecutive course of logical reasoning, to admit the reality of a *vital force* in organization; *a soul* in man distinct from his material frame; and an *intelligent* and *infinite mind*, separate from the external universe, and yet immanent in all its parts.

We have now taken a brief inventory of the various philosophical tendencies of Germany since the commencement of the present century, and can at length sum up the result in a few words.

The opening of the nineteenth century saw the Kantian philosophy in the ascendant; and for the first ten years or more it was publicly taught in most of the Universities, as affording the true solution to all the great metaphysical questions of human interest. *Now*, Kantism is only taught there as a portion of the history of the past.

Fichte and Schelling followed; and the eyes of the more free and eager amongst the philosophical thinkers of that day were dazzled for a while with the subjective idealism of the one and the captivating *Natur-philosophie* of the other. But though both, like Kant before them, left their mark upon the thought of the country and the age, neither have retained any school of followers, and are only expounded now as part of a historical survey.

Next came Hegel, with his enormous power of systematic construction, and drew all the idealistic thought of the day

into the abstract forms of his dialectic process. But the revolutions which began in 1848 diverted all interest from what is merely abstract and speculative; and Hegelism, lingering out a feeble existence amongst its more ardent supporters, has now gradually faded away from the schools of learning, and, like the preceding systems, lives only in the pages of the many histories of philosophy with which the German press has teemed for the last twenty years.

Two main philosophical tendencies remain, and divide between them the entire philosophical interest of the country. On the one side stand Schopenhauer and Hartman, together with the sensational school of Feuerbach, Ruge, and the modern materialists. On the other side stand the school of Fichte, Ulrici, and the *Journal of Philosophy*, experimental in its method, but spiritualistic in its tendencies and results. The former movement is purely and avowedly *atheistic;* or, avoiding the negative expression, we may term it *humanistic*—that is, it is the system which makes *man* the basis and purpose of existence. The latter movement is theistic, regarding God not only as the architect of the universe, but as the moral governor of the world, the fountain of all law and goodness, the object of supreme worship, and the final purpose of all creation.

In this respect the present position of Germany, in regard to philosophy, does not differ greatly from what we see in our own country. Materialism is an intellectual power *here* as well as *there;* and positivism, as it has developed itself out of the school of Mill and Comte, occupies much the same ground that humanism occupies in Germany. On the other hand, we have also *our* spiritualistic school; and a theistic philosophy, which maintains the existence and the immortality of the soul, together with the reality of a divine moral government, is still taught in all the Universities of the United Kingdom. These, in fact, are the two opposite poles of thought which now pervade the whole length and breadth of civilised Europe; and it remains to be seen which will establish itself as the *philosophy of the future.* For myself, I cannot but believe that the religious instincts, the moral yearnings, the irrepressible desire for immortality,

the old inextinguishable belief of the human mind in God as the architect of the world and the governor of mankind, will in the end prevail over every system of philosophy which bounds our view to the seen and temporal, and makes man alone, as we see him, the end and the law of his own existence.

PART II.

METAPHYSICS

(ERKENNTNISSLEHRE).

PART II.

Theory of Human Knowledge.

I.

THERE is no branch of philosophical inquiry which, as far as our own country is concerned, appears to me in so unsatisfactory a state as the *fundamental theory of human knowledge.* In Germany it forms a distinct department of mental science, designated by the term *Erkenntnisslehre;* in England, on the contrary, it has rarely appeared of late years as a distinct subject of investigation at all, but has been usually mixed up with the general procedure of logic, psychology, and metaphysics.

There have been three great attempts to solve the problem of human knowledge in modern times, each one of which forms an epoch in the history of modern philosophy. The first is contained in Descartes' *Meditations,* the second in Locke's *Essay on the Human Understanding,* the third in Kant's *Critik of Pure Reason.* All three of these have left a residuum which has entered into the whole fibre of modern thought; but, at the same time, they each gave *special impulses* to speculation, which, in less cautious hands, led to extreme results. Descartes' philosophy developed into the pantheistic idealism of Spinoza, Locke's into the materialistic sensationalism of France, and Kant's into the abstractions of modern German metaphysics.

The want of a master mind, like that of Locke, to take up the thread of inquiry in England, and guide us through the labyrinth of modern speculation into some definite conclusions, is now seen in the chaotic state of opinion which everywhere prevails as to the primary grounds on which all our fundamental convictions rest, and the con-

sequent want of confidence in the *groundwork* of all philosophy.

If we put the question, On what is based our knowledge of the material world? on what our knowledge of mind? on what our knowledge of the existence of a God? on what our knowledge of mathematical axioms? on what our knowledge of the fixed laws of nature or the ground of morals? we either get no replies at all, or replies of the most discordant kind. Some advocate the claims of sensation as a ground of knowledge, and some intuition; some point to a list of primary beliefs, some to the light of pure reason; some, again, separate the whole sphere of knowledge into departments, and apply a different fundamental principle to each. Thus we are said to know the fact of a material world by *sensation and perception*, to know the truth of the axioms of geometry by *reason*, to know the being of a God by *faith*, to know the distinctions of right and wrong by *moral intuition*, to know the uniformity of nature by a *primary belief*, to know other things by reasoning, testimony, revelation, as the case may be.

Here, perhaps, we find one of our foremost natural philosophers affirming before the world his conviction that we *can* know matter and its varied relations, and that we can know *nothing else;* on the other hand, the advocates of the philosophy of experience, treading in the footsteps of John Mill, declare that matter is wholly unknowable, since, *as matter*, it can never come within the range of experience at all. Sir W. Hamilton proclaimed *ex cathedrâ* the *relativity* of all human knowledge. An Oxford professor based upon this principle a demonstration that God is wholly unknowable to the human faculties, and that our sole refuge for any knowledge of the Divine is revelation. A third great thinker of the age takes up the argument, and proves that, without a previous knowledge of God gained from reason, revelation itself is impossible. And so the student, after following the highest authorities the country affords, is left after all in a perfect chaos of mental doubt and confusion,

Practically, I am well aware, most men do hold to their convictions regardless of all theory; they believe in a

material world, in a soul, in a God, but no thanks to the philosophy of the age! It is rather in spite of such philosophy and its many contradictions that our convictions remain firm and abiding. Such contradictions, however, between theory and practice are not creditable to our powers of intellectual analysis, nor do they conduce to human progress.

As there are no *fixed principles* to appeal to in these matters, the majority of men are led to imagine that they *know* to be true whatever their *mental tendencies* induce them to *think* so. Some years ago I heard a celebrated English ecclesiastic preach a sermon in Rome, the main point of which was to contrast the religious certitude possessed by the Protestant and the Catholic respectively. After pointing out the variations existing amongst the former, he entered upon a string of affirmations, each commencing with the formula, 'We know,'—'We *know* that our Church is infallible,' 'We *know* that its dogmas are true,' 'We *know* that its constitution is divine,' etc. A fine example, I thought it, of the tact with which the preacher knew how to estimate the effect of downright assertion (unaccompanied by a single particle of evidence) upon minds tending to believe, but having no fixed principles to guide them in the formation of their convictions.

From instances of this nature (and they are not confined to the Catholic Church) we have an illustration of the excessively loose manner in which the word 'know' is constantly used. Men are affirming every day that they *know* a hundred things, which may, indeed, be the objects of a very strong *belief*, but which can never be matter of *knowledge* at all. Confounding the spheres of knowledge and belief, they attribute any deviation in others, from what they hold to be truth, to mental perverseness or moral delinquency, and visit it with all the penalties which society will sanction or admit. Everything around us tends to show that there is nothing more important for the peace as well as the welfare of society, than that we should arrive at a clear perception of what we really *can* know and what we *cannot*. It is to this end, therefore, that the following pages are mainly devoted.

II.

What, then, is knowledge? and when may we be said to *know* a thing in the strict sense of the term? I need hardly say in the outset that to have an idea or a conception of a thing does not imply that we *know* it as a reality. I may have the idea of a centaur or a unicorn, but there the matter ends; there is no knowledge involved beyond the mere mental phenomenon accompanying it. And even *if* there be some objective reality connoted by our ideas, it does not follow that the *idea* involves any knowledge of that *reality*. We may have ideas of persons, places, and things which we have never seen, but those ideas are no guarantee either of the existence of the objects themselves, or of our conception of their being accurate and real.

I may have my ideas of a town in Australia, or of a public man in France, or of a mountain in Switzerland; but it does not by any means follow that these ideas are correct—in other words, that they are convertible with the term *knowledge*. Something more is necessary to our *knowledge* of a thing than the mere fact of having an idea, or any number of ideas, about it.

And if an idea or conception of a thing falls short of knowledge, so also does a *belief* or *conviction*. The evidence on which such a belief or conviction rests may vary indefinitely from the weakest to the strongest, but it is *never* convertible with *knowledge*. Sometimes it is immeasurably *far* from the confines of knowledge, sometimes separated from it only by the merest film.

We return, then, to the question, What is knowledge properly so called? and when may we be said to *know*? In place of giving a definition (which would be premature), let us take *examples* in illustration. I know that I have *sensations* of pleasure or pain, *perceptions* of what seem to me external objects, *emotions* of joy or grief, and *ideas* which come and go, *i.e.* pass in and out of consciousness for no very assignable cause. I *know* all this, because in each case it is a direct experience of my own individual self. This knowledge no one can interfere with, no one can dispute; nothing can render it either more or less certain,

—it is a *fact* of my own consciousness, and there it both begins and ends.

But let us go a step farther. If I say I know that this rose is beautiful, what does the knowledge now imply? First, it implies that I have the perception of a rose; and, secondly, that this perception is accompanied with a sense of pleasure as the result of merely contemplating it. I use the term *perception* of a rose without meaning to involve any particular theory of what perception implies. It makes no difference whether it imply the presence of an external object termed a rose, or simply a mental fact which we should indicate as the *idea* or *conception* of a rose. The externality of the object may be left wholly out of account in enumerating the elements of which our knowledge that the rose is beautiful consists. The sentiment of beauty does not depend on the fact of the external object being really present: I can feel it as vividly when I *dream* that a rose is present with me as I can in my waking state. The beauty resides in the whole combination of elements—form, colour, odour, freshness, grace—which go to form the entire idea; but these elements can all be present to the *mind*, all realized in the *conception*, without the presence of any external objects at all. Our knowledge, then, of the fact that a rose is beautiful is purely *ideal*, purely subjective; it is simply the knowledge that a certain combination of ideas respecting form, colour, grace, etc. is always accompanied—to me, at least—by a feeling of pleasure which I call beauty. Everything here belongs to the world of mind, and that only. Sweep away every rose in existence, let the snows of winter banish them wholly from the world of reality, and yet the knowledge that a rose is beautiful remains equally clear, equally sure.

But could we have had this knowledge that a rose is beautiful if we had never seen a rose? Most assuredly. Schiller, when he wrote the *Wilhelm Tell*, had never seen Switzerland; and yet he not only knew that the Lake of the Four Cantons, as he imagined it, was a scene of beauty from the picture formed of it in his imagination, but he could so describe it as to excite the emotion of beauty in others. We may affirm, in a word, that all our knowledge in the whole

sphere of æsthetics is purely ideal, in no way depending upon the existence of an external world. We know that certain things are beautiful to us, because certain ideas and combinations of ideas are invariably connected in our own mental nature with some kind of pleasurable emotion. This is knowledge at first hand, which requires no proof, and is not subject to any kind of refutation. Argue against it as we may, the fact remains ever the same.

Let us take another example from the department of mathematics. We *know* perfectly well that two straight lines cannot enclose a space. What is included, then, in this knowledge? First of all, we must have a conception of a straight line; then, secondly, we must have a conception of what is meant by space; and, thirdly, we must come to the conclusion, by a definite act of our own reason, that no portion of space can be wholly bounded by two straight lines. We cannot say that this is knowledge *at first hand*, or that it is given in an *immediate* experience. The ideas of a straight line, and of space, indeed come to us, as the mind developes in connection with the world around, quite spontaneously. They spring up without any conscious effort on our part. And then the fact that two straight lines cannot include a space follows inevitably from the ideas themselves as soon as we begin to turn them round in our minds and note their relations to one another. Thus, though the fact may not present itself *at once*, yet it is *virtually* included in the ideas themselves, and is recognised as *necessarily* following from them as soon as it is pointed out.

There is this difference, however, between the mathematical and æsthetic conceptions, that the former are fixed and constant, while the latter are ever varying. An object appears more beautiful at one time than another, more beautiful to one person than to another—nay, even beautiful at one time and not beautiful at another. Many things tend to modify the sense of pleasure we derive from the contemplation of a beautiful object. Time, place, associations, surrounding circumstances—all exert an influence in this direction. But when we turn to our mathematical perceptions, we find that no such modifications and alterations are possible; they are clear, definite, sharply defined,

fixed, unalterable. What is true once, we find to be true always. What is true with me, we find to be true to every one else. What this fixity and uniformity may arise from remains to be discovered; suffice it to say for the present, that the conceptions themselves are *purely subjective.* Whether they be awakened by outward things or not, they certainly do not depend *upon* them for their reality. Mathematical symbols are never perfect, never a complete representation of the mental conceptions. We cannot see or feel a line or a point or a figure exactly as it is conceived by the mind; they are things of the reason, not of the senses, and the truth regarding them is rational and not sensational. Thus, whatever we may be said to *know* within the range of mathematics is knowledge given in our subjective conceptions, or flowing from those conceptions by purely subjective processes of reasoning. We have taken two examples of what is meant by *knowing*, selected from two of the most opposite regions of human experience. They agree, however, in one point—namely, in the fact of the knowledge being purely subjective both in its nature and evidence. Let us go now to another region of a wholly different kind—I mean that of theology. The fundamental assertion which underlies all theology, and on which it entirely rests, is the assertion 'that there is a God.' Most men hold the truth of this assertion with the most complete conviction, and regard it as an element of human knowledge to which no rational doubt can attach. Let us see, then, what is contained in this assertion; or rather, what is really implied when I say I *know* that there is a God.

First of all, it certainly implies that I have the conception of a God internally—that is, that I can represent to myself an all-wise, all-powerful, and holy being, who has once created, and who now conserves, all things. But the mere conception of such a being does not carry us far into the domain of theology. There are numbers of things which I can represent to myself without regarding them as really existing. The assertion we are now analyzing, however, not only involves the conception of a God, but it also declares His *existence* out of, and apart from, ourselves. But here, again, we are met with the fact that to conceive

of a being as existing does not really *involve* or *prove* his existence. The Greeks in the Homeric age conceived of Minerva, Venus, Jupiter, etc., as really existing; the Scandinavians regarded Thor and Woden as veritable deities; the Hindoos regard Brahma as a really existing deity; but it does not follow from these human conceptions that Minerva, Venus, Jupiter, Thor, Woden, and Brahma are real existences, or that they are anything more than the creations of the human imagination at certain periods of time, and under certain circumstances. And so it is with our conceptions of God. We may conceive of Him as existing; but this does not carry with it any *proof* of His existence. The affirmation, 'I know that there is a God,' implies something further; it implies that, over and above the conception of Him as existing, we possess sufficient reason for holding His existence to be an objective reality. What this sufficient reason may consist in is very variously regarded; but whatever it may be, it implies that overwhelming evidence exists that this evidence is not individual, like the knowledge of the beautiful, nor merely subjective, like the rational evidence of mathematical propositions, but that it has also an objective validity, bringing us to the knowledge of a reality out of ourselves.

The question, therefore, next comes, Whether we do really possess *any* evidence of this nature; and, if so, where is the point at which the transition takes place from the subjective to the objective side of the case? The conception of a God is in itself certainly purely subjective; and not *only* so, but to a large extent personal and emotive. If we could compare the conceptions entertained by a number of individuals, we should find scarcely any more uniformity amongst them than in the perceptions of beauty. Then, next, the conception of a God *as existing* is, after all, *only* a conception. We may conceive of a thousand things as existing, and really believe them to exist, while they may turn out to be non-existent after all. Then, thirdly, as regards the ground or evidence of the existence of a God, all this ground and all this evidence is simply a subjective process of the human reason. Take the well-known argument from *causality*. The universe around us is a fact, a *stupendous effect;* but

every effect must have a sufficient *cause*. The sole sufficient cause of such an effect is God. This argument is true enough and forcible enough so long as it represents merely a necessary sequence of *ideas*, but shows us no logical passage from the ideas to the reality itself. We need not reproduce the chain of reasoning by which Hume showed the principle of causality to be merely a subjective process, or the still more exhaustive chain of reasoning by which Kant showed that it is merely one of the *regulative* principles of pure reason, and cannot be taken as proving an objective reality without landing us in absolute contradictions. All we need to do is to point out that, according to the highest philosophical authority, whatever the sense perceptions may do, the *reason alone* cannot furnish us with a clear logical proof of any existence *out of itself*.

We find, accordingly, in all the various departments of knowledge to which we have referred, simply a variation of human experience in connection with purely *internal* phenomena. In the region of æsthetics, our *knowledge* is wholly individual. We know a thing to be beautiful simply because we *feel* it to be so. In the case of mathematical propositions, the knowledge involved is of a *fixed* and invariable character, and, in place of being dependent on our own individual emotions, is found to be uniform in the case of others as well as ourselves. In theology the elements involved are, again, different. The knowledge we seem to possess is neither wholly personal on the one hand, nor fixed or invariable on the other; but it contains a special factor different from both—that, namely, of representing the object of our conception as an outward reality, which exists quite apart from our own reason or consciousness. But, notwithstanding this peculiar *objective* feature, when we analyze the elements of which the knowledge consists, they are found to appertain, just as much as all the rest, to the region of inward phenomena. If we press the inquiry, What is the conception of a supreme being? what is the conception of a thing *as existing?* what is the evidence of its existence? what the belief in its existence? —all is ideal together; real enough as mental phenomena,

but utterly insufficient to furnish us with a positive pathway to the actual reality beyond.

Having thus far prepared the way, we come now to a department of knowledge which is regarded rightly as the crucial point between idealism and realism—I mean our knowledge of what is termed the *external world.* When I say I *know* that this table on which I am writing exists, what are the elements which enter into this specific kind of knowledge? First of all, I have the conception of *a table;* but when I speak of *this* table on which I am writing, I experience a mental state quite different from the general conception of a table. I have what is termed the *perception* of a present object, a kind of experience which consciously differs from that which I possess of the beauty of an object, of a mathematical axiom, or of a supreme being. The evidence of an external reality is borne in upon me in the case of the perception referred to in a manner *quite different* from what it is in the three cases already analyzed. We must look somewhat closely, therefore, into the nature and contents of what is termed perception, and see what is the kind of knowledge we derive from it.

Now, the perception of a table, I need hardly say, is not synonymous with the table itself. By the one we signify, popularly, a mental representation of the external object, a representation more or less perfect; by the other we mean the substantial objective reality itself, regarded, at least, as such by all men in the ordinary common-sense view of the case. The second element entering into our knowledge of an external object, therefore, is just the same as what we have already noted in the case of a divine person. We regard the object of our mental representation as an actual existence out of ourselves,—a conviction which certainly accompanies our sense perceptions with well-nigh *constant* uniformity.

This mere conviction, however, is not sufficient to warrant us in saying we have a positive *knowledge* of the external world. The third element before adduced has still to be added—that is to say, there must be some sufficient reason on which our conviction rests; for the validity of a mere

mental conviction must not be taken for granted without some other ground to go upon. There are many cases in which the conviction turns out to be palpably untrue. What, for example, can be more vivid, or carry with it a stronger conviction of reality, than the representation we often have of external things in our dreams? and yet this representation turns out after a time to be a mere delusion. Nor are such delusions confined to our sleeping state. Our senses deceive us in a hundred different ways, and have to be constantly corrected by the critical reason. Nay, when we go into an accurate analysis of human convictions, we find that in many things men fall under well-nigh *universal* delusions until they are set right by the progress of science. Take as an example the case of colour. Is it not considered certain by the mass of mankind that colour exists objectively as a phenomenon of the outer world,—that one thing is *essentially* white, another green, another blue, and so forth,—and that if there were no eye to observe, the colour would continue to exist, just as an external object would without any percipient mind? And yet nothing is more demonstrable than that such is *not* the case,—that colour, on the other hand, is no objective reality, but that it merely arises from the mutual relations of the object, of the rays of light proceeding from it, and the structure of the eye.

III.

This brings us, therefore, to inquire, What is the ground on which our knowledge of an external world rests, and where are we to find the sufficient reason for holding our conviction of it to be perfectly valid?

The most immediate answer to the question is undoubtedly *this*, that the conviction of the reality of external things is an instinctive dictate of *common sense*—common sense being an equivalent expression for the universal belief of mankind. But is this *common sense* to be implicitly trusted? Certainly not. There are numerous cases in which *common sense* has led mankind universally to believe a thing as undoubtedly true, which science and criticism have afterwards proved to be false. Common sense, for

example, long entertained the universal belief that the sun rises and sets every day. Science has had to correct this belief and explain the phenomena on quite another principle. So, *generally*, common sense will serve sufficiently as a practical guide for human life, but will not hold good as a test and basis of human *knowledge*, strictly so called.

Let us see, for example, how the verdict of common sense in relation to the external world has fared at the hands of the most acute and renowned philosophical thinkers. The two great modern schools of philosophical thought are the idealistic and the sensational. Descartes may be regarded as the head of the former; and his great effort from the first was to find out what we *can* positively know, and what we *cannot*. He shows that it is a universal delusion to suppose that we can know anything positively beyond the direct modification of our own mind and the conclusions logically drawn therefrom. But there is no species of logic by which we can reason from the subjective impression to the outward reality. The one has no necessary connection with the other. His only refuge was, therefore, to appeal to the divine *veracity*, and affirm the existence of external things as we experience them, on the ground that the Deity cannot deceive us in implanting these natural beliefs. The certainty of the external world, therefore, rests on the certainty of the existence and moral attributes of God, which, we have already seen, are impressions quite as subjective as any others, and which do not therefore carry with them the guarantee of outward existence. Berkeley's argument on the subject was far more logical. It is admitted by all, he argued, that all we know of the external world is derived from impressions made upon or existing within our own minds. These impressions we *know*, but how do we know that anything exists outwardly to which they correspond? An outward thing cannot, in fact, by any possibility resemble an inward impression; the two, if they co-existed, would be wholly different in their very nature. Yet if material things do not resemble the ideas we have of them, what notion can we form of them, or what conception can we have of matter at all, *independently* of our ideas? The conclusion was that we have no evidence of

the existence of matter at all, and that what we term the material world is, strictly speaking, a divine arrangement for adapting the world to our own spiritual existence. Hume took precisely the same view of the subject, only leaving the divinity out of the question.

It was this form of scepticism that roused Kant from his dogmatic slumbers, and determined him to probe the foundations of human knowledge anew. Starting from the standpoint of experience, he accounted for all the relations of time and space, showed how our notions of the material are formed and developed, and laid bare the whole process by which we gain a complete system of human truth; but, after all, the material world remained to him a mystery. For the *phenomenal* world he could fully account; but as to the *ens realissimum*, the *noumenon*, the *Ding an Sich*, this was an insoluble remainder which defied all analysis, and could never enter within the limits of knowledge at all. In all the modern systems of idealism which have developed themselves out of the Kantian school, the same conclusion appears in different forms. 'The Me' and the 'Not me' of Fichte; the 'subject-object' of Schelling; the world-process of Hegel; the *Willens-bestimmungen* of Schopenhauer; 'the unconscious' of Hartman,—all are different ways by which our ignorance of the world of reality is veiled and disguised, and the only conclusion to which they all lead is that, logically considered, we can know our own impressions, ideas, and mental processes, but that we can know nothing positively beyond them.

And if we turn from the idealistic to the sensational school of philosophy, the same result meets us in another form. The outcome of the whole school of positivism, as far as our knowledge of the external world goes, may be summed up in the following words of one of its most eminent advocates:—'The conviction that human intelligence is incapable of absolute knowledge is one that has been slowly gaining ground as civilisation has advanced. Each new ontological theory, from time to time propounded in lieu of previous ones shown to be untenable, has been followed by a new criticism leading to a new scepticism. All possible conceptions have been one by one tried and

found wanting; and so the entire field of speculation has been gradually exhausted without positive result, the only result arrived at being the negative one above stated, that the reality existing behind all appearances is, and ever must be, *unknown.*' To this conclusion almost every thinker of note subscribed. And again: 'Matter, in its ultimate nature, is as absolutely incomprehensible as space and time. Frame what suppositions we may, we find, in tracing out their complications, that they leave us nothing but a choice between opposite absurdities.'

To what, then, does our analysis of the fact of knowing lead? To this, that whatever be the sphere to which our knowledge relates, it always *begins* with a direct, immediate mental representation of the object. In some cases it goes no further than this. Thus, I know that an object is beautiful by the direct intuition of it as such; in other words, I form a mental representation of a thing which produces pleasure simply by the contemplation of it, and this is what I mean by its being beautiful. Whether it may produce the same pleasure in others, I do not know *à priori.* This is a matter to be learned by experience; and in proportion to the numbers to whom I find the same pleasurable emotion extends, I know that the object may be termed beautiful not merely to myself, but to the world at large. The only positive knowledge, however, is that which follows from the immediate intuition of the object to myself individually. Again, we know that we possess a mathematical idea by the same process of direct, immediate intuition. No supposition of any external reality is at all necessary to account for it; it is a direct inward experience, which nothing can invalidate and nothing destroy. Moreover, on the supposition that the intellectual faculties of others are the same as our own, we affirm this axiom as a fixed unalterable concept to be as essential to them as to us. But the latter is a conclusion which cannot stand on the same platform of direct evidence as the former, and which, indeed, can only be finally substantiated by subsequent investigation.

If we look next at the fundamental fact of theology,—the existence of a God,—how does the matter stand with regard

to our knowledge here? That I form inwardly for myself the conception of a supreme being is undoubted. I know, at any rate, that such a *conception* exists, because it is a part of my own inward experience. Nor is this all. I form the conception of a supreme being as an objective existence; and this also I know as an immediate certainty. But the fact that I form the conception of a supreme being *as existing*, does not involve any proof that such a being does actually exist out of and beyond my own conceptions. For that I must have evidence of an objective nature. What, then, is that evidence? Is it faith? But faith is only subjective representation,—it involves an inward idea, but no more. Is it reason?—reason assuring me that every effect must have an adequate cause, and that no cause is adequate to the structure of the universe but an infinite power and an infinite intelligence? But what, after all, is reason but a *mental* fact which can never guarantee the objective validity of its conclusions? And how can the law of causality assure me that because one thing exists, therefore another thing wholly different must exist likewise? And if there must be a cause for everything existing, what is the cause of the infinite power and intelligence that constructed the world? We cannot reason *objectively* about a first cause without involving ourselves in paralogisms which invalidate every conclusion to which the reason *alone* can lead us.

The only thing we positively *know*, therefore, is that we have the conception of a God, and that we conceive of Him as existing. However strong may be our faith in a supreme being, our actual *knowledge* goes no farther than this.

Lastly, with regard to the external world, what we actually *know* is that we possess an infinite number of sense perceptions; but how far they are the exact counterparts of any existing reality, of this we are altogether ignorant. We may believe that they are so, and we may act upon that belief, but we cannot affirm that we *know* it. Knowledge in this case, as in all the others, does not go beyond the actual phenomena of which we are inwardly conscious. To these we are shut up within a circle, which no logic enables us to break through.

Whatever be the system of philosophy we adopt, this is the ultimate conclusion to which we logically arrive. The contest as to the basis of human knowledge has been going on from the time of Plato, and is not yet decided. The reason is that neither the one system nor the other is capable of proving its thesis demonstratively. Realism attempts to show the passage from thought to being, from the subjective to the objective, but fails to find any pathway which strict logic can accept. In attempting to explain everything on the experience hypothesis, it turns out that experience itself, strictly interpreted, never carries us beyond actual mental phenomena; so that realism, on its own principle, falls back into idealism. But idealism, in its turn, fares no better. Starting from reason, thought, inner consciousness, it seeks to interpret the world from this point of view, and in its course becomes involved in a maze of logical doubts and paralogisms.

But now comes the great point we have mainly to consider. Spite of all we have said, the world practically arrives at realism without the aid of philosophy either in one form or the other, and is troubled with no doubts whatever as to the reality of the knowledge which it possesses of the external world. As, therefore, the human reason is one and the same,—whether in its spontaneous or its more reflective operations,—it becomes an object of interest to inquire how it is that *spontaneously* men are realists without being troubled with any doubts or difficulties, whilst *reflectively* and philosophically they are driven into an invincible scepticism, out of which no pathway is visible? The most obvious reason to be assigned for this phenomenon is that the ordinary method of philosophy must be different from the method of nature, as they lead to such opposite results. Is it possible, then, to find out what the method of nature really is, and by what hidden process it is that the world—the world of spontaneous thought and action—uniformly arrives at the same realistic result? To dive into the depths of the human intelligence, in its earliest and most spontaneous form, and to lay bare the hidden processes by which our most primitive ideas are formed, is a matter of no little difficulty. There is one principle, however, to

guide us in doing so; and that is that the human intelligence must be one and the same through all its different phases, and must be governed in its operations fundamentally by the same laws of evidence. In investigating, therefore, the more hidden processes of the human mind, we can be greatly aided by watching those more mature processes which lie patent before us, and can be, comparatively speaking, easily analyzed. Before we ask, therefore, how the world arrives at realism, it is well for us to ask how the world arrives at *any assignable truth whatever.*

No one will be disposed to deny that there are certain departments, such as mathematics and physical science, in which we have arrived at a body of ascertained and acknowledged truth. How, then, has this been accomplished? The ancient philosophers attempted to accomplish it in the same way as the modern philosophers have proceeded in the department of metaphysics. They attempted to do it by the force of logic. They took what seemed to them self-evident axioms, and reasoned down from them in a straight line, and hoped in this way to comprehend intellectually the whole world of nature. Some of the modern idealistic school have done the same; but, with the exception of a few flashes of intuitive genius, their method has proved as barren as that of their predecessors in the ancient world.

It was not till the inductive method of research came into use that a sure and certain fund of positive results began to accumulate. But what do we mean by the inductive method? The ordinary answer would be something as follows. By the inductive method, we mean the process of rising from particular facts to general conclusions. The facts are first 'colligated,' and then a general law is inferred by means of which they are explained. Proceeding in this way, we rise to laws of progressively higher generality, until what we term universal laws of nature are evolved. This explanation may give a sufficiently accurate notion of induction *objectively considered*, but it gives very little idea of the *mental processes* involved in the observation of facts and the evolution from them of general laws.

Regarded subjectively, the first step in the creation of scientific truth is the natural impressions made by external things on the human mind. These expressions give rise to a vast number of ideas which are ever floating in and out of consciousness. Such ideas are not fixed, they are not verified, they are not in any way systematized; they arise promiscuously from the natural reaction of the mind and its faculties when stimulated by the world without. But as thought goes on, some particular conceptions are singled out which seem to be important as explanatory of the phenomena in question; and these conceptions are formed into a hypothesis. Here, then, we have the most primitive form of scientific research—that is, the mind stimulated by a desire to know, forming hypotheses around which the facts can be marshalled in some intelligible order. The next step is the testing of such hypotheses. As observation goes on, it is tolerably certain that facts will turn up which refuse to combine with the hypothesis already formed. This leads to further research, and superinduces *experiment* as well as observation; the consequence of which is that the hypothesis has to be altered and transformed, until gradually we arrive at a definite series of conceptions which all the facts of the case seem fully to bear out. This whole process, I may remark, is anything but a strictly logical one; it may rather be described as *the common sense of mankind moving onwards to certain definite convictions, substantiated by the convergency of evidence from every quarter upon them.*

Lord Bacon, in the enthusiasm with which he first propounded the inductive method of research, imagined that his new organum was an instrument of discovery which would altogether supersede individual sagacity. And not a few of Lord Bacon's followers have cherished the same delusion. The best authorities, however, of the present day have fully recognised the truth, that although definite inductive processes are of great value, the ultimate judge of truth is after all the common sense of mankind. Thus Dr. Carpenter, in treating of the Logic of Science before the British Association in Brighton, of which he was the president, wrote in his introductory address as follows:— 'Our scientific interpretations are clearly matters of *judg-*

ment, and this is eminently a *personal act*, the value of its results depending in each case upon the qualifications of the individual for arriving at a correct decision. The surest of such judgments are those dictated by what we call *common sense*, as to matters on which there seems no room for difference of opinion, because every sane person comes to the same conclusion, although he may be able to give no other reason for it than that it appears to him "self-evident." Thus whilst philosophers have raised a thick cloud of dust in the discussion of the basis of our belief in the existence of a world exterior to ourselves, of the *non ego* as distinct from the *ego*, and while every logician claims to have found some flaw in the proof advanced by every other, the common sense of mankind has arrived at a decision which is practically worth all the arguments of all the philosophers who have fought again and again over this battle-ground. And I think it can be shown that the trustworthiness of this common-sense decision arises from its dependence not on any one set of experiences, but upon our *unconscious co-ordination of the whole aggregate of our experiences*—not on the conclusiveness of any one train of reasoning, but on the convergence of all our lines of thought towards this one centre. Now this common sense, disciplined and enlarged by appropriate culture, becomes one of our most valuable instruments of scientific inquiry, affording in many instances the best and sometimes the only basis for a rational conclusion. Let us take as a typical case, in which no special knowledge is required, what we are accustomed to call the "flint implements" of the Abbeville and Amiens gravel beds. No logical proof can be adduced that the peculiar shapes of these flints were given to them by human hands; but does any unprejudiced person now doubt it? The evidence of "design," to which, after an examination of one or two such specimens, we should only be justified in attaching a *probable* value, derives an irresistible cogency from accumulation. On the other hand, the *improbability* that these flints acquired their peculiar shape by *accident*, becomes to our minds greater and greater as more and more of such specimens are found, until at last this hypothesis, although it cannot be directly disproved, is felt to be almost incon-

ceivable, except by minds previously "possessed" by the "dominant idea" of the modern origin of man. And thus what was in the first instance a matter of discussion, has now become one of those "self-evident" propositions which claim the unhesitating assent of all whose opinion on the subject is entitled to the least weight. We proceed upwards, however, from such questions as the common sense of mankind generally is competent to decide, to those in which special knowledge is required to give value to the judgment, and thus the interpretation of nature by the use of that faculty comes to be more and more individual, things being "perfectly self-evident" to men of special culture which ordinary men, or men whose training has lain in a different direction, do not apprehend as such.'

Thus far the remarks of Dr. Carpenter on the function of common sense in the investigation of scientific truth. The last sentence touches upon a point of great importance—namely, that there is a gradation in the sciences, according to which the function of common sense, in their verification, is larger or smaller, and the function of pure logic in the inverse proportion. Thus in geology the evidences have to be co-ordinated from a vast number of sources; and here the exercise of a clear-headed common sense, aided and enlightened by the knowledge of cognate science, is of the highest value. In astronomy, on the other hand, the processes of proof are, for the most part, so entirely mathematical, that the function of common sense is proportionally small. But even here it cannot be dispensed with, inasmuch as there will always remain certain fundamental doctrines which are incapable of mathematical proof, and must be judged of through conflicting evidences. Even in this most exact of sciences, observes again Dr. Carpenter in the same address, we cannot proceed a step without translating the actual phenomena of Nature into intellectual representations of those phenomena; and it is because the Newtonian conception is not only the most simple, but is also, up to the extent of our present knowledge, universal in its conformity to the facts of observation, that we accept it as the only scheme of the universe yet promulgated which satisfies our intellectual requirements.

Even pure mathematics, in their fundamental axiomatic truths, are not raised above the region in which common sense has to be exercised in their verification. Just as in the case of physical science the primary consciousness is that of a numberless flow of ideas, most of which pass away *entirely*, while only those conceptions which strike us as being most explanatory of the phenomena are retained and verified, so it is also in mathematics: the mind of man forms a thousand mathematical notions, some true and some false.

Had we never found out the value of some of these notions, they would not strike us as being in any way different from the ordinary flow of thoughts which pass in and out of the consciousness. What is there to attract us as objects of interest or value in the passing conception of a line or an angle or a plane figure of any kind? It is only when we select the more striking and recurrent of these notions from the crowd,—only when we begin to probe them, elaborate them, find out their application to practical uses in the outer world,—that such mathematical ideas take any fixed or scientific form. But all this is found out by a multitude of tentative efforts, of which, perhaps, the mind has hardly been conscious, the result of which, however, has been to fix a certain number of fundamental truths, which we accept then as axiomatic. The very formation of these axioms has, therefore, been a work of *common sense* acting upon our inner experiences; and we feel perfectly convinced of their truth from their complete consistency with the whole of the perceptive phenomena we possess of the outer world.

We have now, I think, sufficiently explained the process by which the mind of man arrives at any assignable truth within the sphere of its ordinary scientific inquiries. In every case it begins by arresting out of the many conceptions which turn up in the natural flow of our consciousness, those which seem to possess special value as explanatory of certain phenomena around us. Out of these, hypotheses are formed that for the time take the place of those as yet unknown laws of nature which the reason of man so ardently desires to comprehend. By subsequent observation and

experiment, these hypotheses are either verified or transformed; and so gradually we arrive at the convictions which govern the whole *scientific faith* of mankind.

Now, as this seems to be the ordinary procedure of the human reason in its developed and reflective form, it is natural for us to inquire whether, on a more primitive and spontaneous sphere of operation (that, namely, of our preconscious activity) it does not follow exactly the same laws, and whether in arriving at realism the human mind has not gone through tacitly a succession of tentative efforts precisely similar to those involved in every other intellectual process whatever. On this supposition, the process by which we arrive at the conviction of the existence of an external world would be as follows: Firstly, The mind, as yet unconscious of all beyond *itself*, experiences a number of vague, floating sensations and impressions; secondly, These impressions first conveyed by the senses are retained, reproduced, and combined with new perceptions; thirdly, As such experiences progress and multiply, there are some which stand out from all the rest with a peculiar vividness and intensity. In place of coming and going, — of reappearing and melting away in the very process of experiencing them,—they are persistent and unchanging; they refuse to be seen and dismissed at pleasure, but return ever and anon in the same form and with the same obstinate persistency. But, fourthly, why should they do so? and how can the mind account for this particular phase of its daily life? Not being able to control or get rid of such perceptions, it begins to attribute them to an outward cause; and this forms, as it were, a primary and spontaneous *hypothesis*, by means of which all these vivid and unmanageable phenomena are accounted for.

Let us, for the sake of explanation, imagine a mind created mature, set down in the midst of the wonders of nature, and left to form its own conclusions. There, in the distance, we will suppose, stands a lofty mountain, which attracts the organ of sight. To the mind we are now imagining, it would be simply a *sensation;* but amidst all the flow of ideas and impressions this particular sensation *will* recur. The mind in question has, perhaps, a hundred

other similar sensations every day which do *not* recur. Why, then, it might naturally ask, should this particular sensation recur whenever my eye is directed to one particular region? how is it that it always comes with such remarkable regularity and force? how is it that it changes with the variations of light and shade, and disappears every night? how is it that I do not have the sensation when sight is closed? how is it that it gets smaller and smaller as I recede from, larger and larger as I approach, it? All these questions can be answered intelligently on the hypothesis that the mountain is an external reality independent of itself. True, the various phenomena enumerated are all subjective, and we can find no logical passage from the mental impressions to the reality; but we find within our reason an intense desire to *know*,—*i.e.*, to account for what we experience,—to be able to explain it; and on the ideal hypothesis there is no explanation possible. Amongst the ideas, however, which pass through our minds, we come upon that of an external world apart from ourselves, which acts upon our senses and produces the fixed perceptions which so regularly recur. This idea of an external world is, at any rate, a *possibility*. We assume it, therefore, as our *hypothesis;* and immediately we do this, the phenomena begin to gather round it in some intelligible order. We can now see why the perception of the mountain came in the first instance, why it recurs, why it alters, why it disappears and comes again, why it grows larger and smaller, etc. We know as a fact that our perceptions of the size, distance, direction, etc. of objects come to us just in this way. They are all acquired by experiment; the truth grows up gradually in the mind, and is confirmed and fixed by numberless tentative efforts in the same line of analysis. And if the elements of size, distance, direction, are so learned, is it not pretty certain that the notion of an external world comes to us in the same way—first, that is, as a spontaneously-working hypothesis, and at last as a fixed and settled conviction?

Now, of course, the supposition we have made is an impossibility. We have only used it, however, as an illustration to show how under those conceivable circumstances the notion of an external world would dawn upon us

gradually by the same process as all the other elements of human knowledge. But let us try to translate this conceivable though impossible case into a real one. Every infant that is born into the world possesses a mind, which has to gain in some way or other a perceptive knowledge of things around it. We notice that during the first months of its existence that mind is struggling out of a state of bare receptivity into what we may call a state of *world consciousness*. It is perfectly true that we cannot enter into this mind and watch the process by which that struggle takes place; but if the laws of intelligence are the same for every period of the soul's growth, then by analogy we can frame to ourselves a complete representation of what that process must be. A multitude of impressions are pouring in upon the infant intelligence at almost every waking moment. Those impressions which are most vivid are spontaneously arrested and observed; they recur over and over again, they are recognised anew from day to day, and the spontaneous logic of the nascent reason forms for itself the dim hypothesis of an external object, which subsequently by innumerable trials is confirmed, verified, and at length completely established as a fact. Thus we have no need to have recourse to any supposition of innate ideas; we have no need to deduce the world-consciousness from the tactile impressions or the muscular sense. These no doubt enter into the process; but every sense we possess, being the inlet of vivid impressions which ever and anon recur, goes to supply data for the preconscious intelligence to act upon, and helps both to build up the hypothesis of an external world, and then to establish it as a fixed and unalterable conviction.

We can now see what the method of philosophy has been in attempting to establish the truth of realism, and what is the method of nature and common sense. The former starts from our direct internal experiences, and reasons down from them in a series of logical syllogisms, which never succeed in breaking through the barrier which separates the subjective from the objective world. The latter starts also from our inward experiences; but in place of proceeding in a straight line of logical inference, it selects

some one or other of its ideas as a possibility, forms out of it a working hypothesis, tests the phenomena of the case by this hypothesis, finds it either confirmed or exploded. In the latter case, the hypothesis has to be transformed, perhaps many times over, until it comes into a shape in which all the facts arrange themselves with due order and consistency. When this is done it only needs continued observation and experience to frame it into a *final conviction.*

All the different branches of human thought and conviction may be tested by this method. Let us see how it applies to the convictions which lie at the basis of natural theology. We have already seen that no direct logical proof exists of the existence of God which, if carried out, does not involve us in *contradictions.* This is shown to evidence equally by idealists and positivists, by Kant and Herbert Spencer. We can, in fact, no more prove the existence of a God by a logical argument, than we can prove the existence of an external world; but none the less may we obtain as strong a *practical* conviction of the one as the other.

How is this to be done? We start with the indubitable fact that the notion of a supreme power that first created and now governs the universe exists within the human mind as a *possibility.* The nature of this power, however, as an external fact, we now see, cannot be the direct object of human knowledge. We find, accordingly, that various hypotheses have been framed at different periods of human history to explain the world's phenomena. One hypothesis is that of *chance.* But this could never retain any hold on the general opinion of mankind. Analyzed to its primary elements, the doctrine of chance is simply the negation of any cause whatever,—the position that the universe exists only by itself, without any assignable reason for all the infinite marks of design which it exhibits. This is an hypothesis which could never be maintained as any satisfaction to the human reason. Another hypothesis assigns a hierarchy of deities for the government of the world. This hypothesis appears to be only incident to an extremely immature and undeveloped condition of the human intellect. It coheres so little with the phenomena of the universe, or the moral consciousness of humanity,

and at the same time gains so little support from the investigations of the human reason, that it never holds its ground long after any moderate degree of culture has been attained.

A third hypothesis is the pantheistic,—that which gives a soul to the world, and makes nature but the external manifestation of it. But in the face of all the suffering, the misery, the vice, and the widespread *evil* of every kind which has ever abounded in the world, it seems unlikely enough that the common sense of mankind will ever rest in an hypothesis which not only makes God the author of all, but which makes 'all the ills which flesh is heir to,' as well as all the sin, part and parcel of the divine life. Pantheism may approve itself as a mere theory to the speculative reason of many, just as Berkeley's theory of the outer world can be vindicated triumphantly by the processes of pure logic; but the one has no greater claim to satisfy the common sense of mankind than the other. We can no more easily imagine ourselves to be parts of the divine life and experience, than we can imagine the world to be only a vision of our own spirits. Fourthly, there is only one other possible hypothesis we can form as to the origin and government of the world; for either, firstly, it had no creator; or, secondly, it had more than one creator; or, thirdly, it and the creator are the same; or, lastly, it was created by *one supreme being*. This last monotheistic hypothesis is that which has approved itself, in the main, to the common sense of all the more cultivated and developed nations of mankind. For when the mind of man, cultivated by science, contemplates the infinite marks of design, from the revolution of the planets down to minutest arrangements of organic life, it cannot rest in the thought that there is no supreme designing power that sees and governs the whole. When the conscience, awakened by culture, feels the force of moral law which impels to right and condemns the wrong, uniting happiness with virtue and misery with vice, we cannot banish the thought that there is a supreme lawgiver and judge, from whom all those moral sanctions proceed which reward the good and punish the evil. When we regard the religious

phenomena of human life, the impulse to worship, the longing for immortality, the aspirations of the heart towards infinite purity, perfection, and love, we cannot rest in the belief that all this is empty sentiment devoid of foundation in truth, and pointing to no final satisfaction here or hereafter. That we have no innate knowledge of God is perfectly true; that we cannot arrive at a complete logical demonstration of His existence is true also; but this no more *disproves* His existence than the idealism of Berkeley or Hegel can disprove the material universe. On the other hand, we arrive at a scientific belief in the existence of God just as we do at any other possible human truth. We *assume* it as an hypothesis absolutely necessary to account for the phenomena of the universe; and then evidences from every quarter begin to converge upon it, until in process of time the common sense of mankind, cultivated and enlightened by ever accumulating knowledge, pronounces upon the validity of the hypothesis with a voice scarcely less decided and universal than it does in the case of our highest scientific convictions. Moreover, let us ever remember that the evidence is not yet complete. Just as in the case of great scientific theories, it requires some generations of thinking men to work upon them before all the evidence converges, and they take their place amongst the fixed, unalterable convictions of humanity, so also in the case of this greatest of all hypotheses (that of a supreme being), historic thought has been adding proof after proof and illustration after illustration, and the process is still going on; so that it is quite open for us to believe that the common sense of mankind will, in the long run, be so dominated by this convergency of evidence, that the existence of the Deity will present as much the aspect of a truth evolved from exact science, as the Newtonian theory of the solar system, or any other great scientific doctrine which has raised itself above the level of all human doubt.

I have now completed the purpose I had in view in composing this little monogram on the theory of human knowledge. I have attempted to show, first of all, that there is only one kind of knowledge which is absolutely, immediately, and perfectly sure, and that is the knowledge or

consciousness we have of the phenomena passing through our own minds; and that this is the starting point for knowledge of every other description. I have attempted to show, secondly, that the effort to build up upon these inward phenomena a body of scientific truth by a strict course of logical inference is futile, whether it pretend to lead us to realism on the one side, or idealism on the other. I have attempted to show, thirdly, that, when once out of the sphere of immediate consciousness, there is one and only one valid philosophical method remaining, equally applicable to all departments of human thought—that, namely, which is followed in the investigations of inductive science, and is based upon the judgment of common sense, guided by a concentration of evidence from every quarter.

In this way are formed not only our ordinary convictions in the affairs of every-day life, not only our historic beliefs, not only our scientific conclusions, but also our beliefs in an external world, and in the existence of a God and Father Almighty, maker of heaven and earth.

PART III.

PSYCHOLOGY APPLIED TO EDUCATION.

LECTURE I.

THE purport of the following lectures is to offer some thoughts on the application of mental philosophy to education. The subject itself, I may remark, is somewhat new; for although it has been often recognised and affirmed that the basis of education, theoretically considered, should be laid in a due consideration of psychological principles, yet very little has as yet been done to connect the one with the other. The rules and processes of education have hitherto been for the most part *empirical.* I do not say that this is a fault, or a procedure to be at all regretted. All human arts and activities, of whatever nature, are empirical before they are brought within the range and influence of a definite science. In the earlier stages of every possible sphere of human action, experience is the best and indeed the only guide. No wonder, therefore, that it should have hitherto been the chief guide in education, and that it should have led us here, as well as in various other departments, to many good results.

The question, however, which we have now to moot is, Whether the time has not arrived for making practical use, at least to some extent, of the principles of psychology. Not that we want to *dispense* with the aid of experience in education, but rather to inquire whether experience must positively do everything; and whether there may not be some amount of fresh light thrown over the whole question through the influence, well applied, of psychological science.

Now, the decision we come to on this point will, of

course, depend mainly on the view we take of the nature and range of psychology. If psychology is merely a natural history of mental phenomena, if it confines itself simply to giving a catalogue *raisonné* of the observed facts of consciousness, we cannot expect that it will have any very wide and important application to subjects lying without its own immediate range. No branches of mere *natural history* can possibly have any such widespread applications. The classification and naming, for example, of plants and animals may, indeed, be most *interesting* to the naturalist; but no one expects to find any great *practical application* of natural history, when thus studied, to the other arts and sciences. The mere cataloguing of the earths, minerals, and metals may offer much to delight the mind and stimulate curiosity; but *here* the value of the study, thus conducted, virtually stops. When, however, we take up any branch of investigation and pursue it as an inductive science, the results are wholly different. Botany, zoology, mineralogy, and all the other kindred branches, when pursued *scientifically*, take us below mere facts into general laws and principles, which find an application to all the ramifications of human knowledge and human life. I cannot, in the outset, draw your attention too emphatically to this great distinction, the distinction between a mere natural history and an inductive science. Imagine to yourselves the science of chemistry pursued simply as a natural history of organic and inorganic materials. One cannot say, indeed, that it would be of *no* value, inasmuch as the observation and colligation of *facts* is always a preliminary step necessary to the development of every science; and even over and above this, it might prove practically useful for us to know that such and such substances with such and such properties *exist*, and are always found under given circumstances. But how confined, how unimportant, how insignificant is the application which could be made of *this kind* of isolated knowledge! On the other hand, consider how great is the range, and how infinitely varied the applications, of *chemical science* properly so called. Once sink down to first principles, once get hold, for example, of such ideas as are involved in chemical *analysis*, or the laws

of chemical combinations, or the doctrine of chemical equivalents, and a SCIENCE results which carries its light into all the different branches of human life, applies to every known art, helps to develope every region of knowledge lying above it, and thus gives direction, more or less, to the whole range at once of *scientific thought* and of *human industry*.

Now, looking at psychology as a *science*, we cannot say that it has yet come into that *perfect inductive form* to which so many of the other sciences have arrived. We cannot say that we have yet got down to any great fundamental *laws* and *principles*, out of which large and varied conclusions can be deduced with the same certitude with which they are brought forward in the more perfectly scientific branches of human thought.

Take the two main schools of psychology in this country, —I mean the ordinary mental philosophy of Scotland as developed by Reid, Stewart, Brown, and Hamilton, on the one side, and the expansion of the Lockian school, as seen in Mill's *Analysis* and similar works, on the other. I should be indeed the last to deny to the Scottish school of mental philosophy its due meed of praise, or withhold a hearty recognition of its great services in the history of our literature; but when all *that* has been said, it still remains true that the Scottish school gives us rather a preparation for a philosophy than a philosophy itself. If we except some isolated discussions on the origin of our ideas, on the primitive character of the faculties, and certain criticisms on the varied phases of idealism, the chief aim of the Scottish school has been to work out a complete classified list of mental phenomena, and reduce them under certain definite heads, termed powers or faculties. In all this we find, it is true, a large amount of good practical mental analysis, but the problem of descending from our actual mental states to their *primitive form* is by no means effectually solved. The way in which the whole fulness and vigour of our mental life grows up from the primary laws of intelligence is not fully or scientifically traced; and, consequently, we fail to derive from this school any such great and fruitful principles as we should require to possess before

any direct application of psychology could be made to the rules and processes of education.

With regard to what we may term the *sensational* school of English psychology, a considerably greater amount of analysis has undoubtedly been here attempted. Just as was the case in the French materialistic school of the last century,—to which it is closely allied,—so also in England, a very considerable expenditure of thought and ingenuity has been applied to the task of tracing all our mental powers down to the primary intimations of the *senses*. Many important facts, many useful principles, many recondite processes of mind have been brought to light in the course of this analysis; but after all the result remains wholly partial and one-sided. It is tacitly taken for granted that SENSATION is the primitive form of all mental life, that the impressions made on us through the senses are the starting-points of all mental activity, and that from these impressions the whole structure of our subsequent knowledge has to be built up. All these suppositions, I believe, are quite gratuitous. They have been for the most part assumed rather than demonstrated, and will not bear any close philosophical analysis. There is a prior fund of mental life and activity underlying all our *sensations*. Experience, accordingly, is not a simple primitive fact, but is the result of mental laws working in conjunction with outward nature. So long as these preconscious forms of mental life are lost sight of, the sensational school cannot but be regarded as fundamentally imperfect and unsatisfactory. It gives an unnatural amount of importance to sensation, by regarding it as the original mental phenomenon out of which our knowledge flows, and neglects the *more* primitive and *more* universal laws which underlie it,—laws without which no perception can be realized, which govern the whole proceeding of the human intellect, even to the dawn of consciousness itself, and which thus connect the phenomena of mind with the more universal processes of nature. All life is really one; and not till mental life comes to be studied as a department of the great life of nature, shall we succeed in realizing its most primitive forms — not till then shall we discover mental

principles which will bear a universal practical application.

Whether, therefore, we look at the Scottish school of psychology on the one side, or the English sensational school on the other, in either case we find comparatively *little* which has borne a direct application to human life at large, and to the processes of education in particular. Isolated efforts there have been in England (and still more so in Germany), which point to the development of a deeper and more fruitful school of psychology in the future. Of such a nature are the elucidations thrown upon mental phenomena by the fuller knowledge of the nervous system, the closer observation of insanity, and the study of the thoughts and instincts of animals. Of such a nature are the efforts made to comprehend the facts of mesmerism, electro-biology, and unconscious cerebration. Of such a nature are the investigations which throw light upon the development of mind out of its lower historic forms, and the gradual evolution of intellectual power on the principle of hereditary transmission. All these, and other similar researches, indicate new spheres of observation, which are gradually connecting psychological studies with the ascertained results of physiology, anthropology, and history; and which in the process of time will, probably, lay the foundations for a totally *new form* of mental science,—one which, being based from the very commencement on more universal principles, will bear a more direct and fruitful application to human life at large.

From what I have now said, you will easily gather this result,—that as far as my own opinion goes, the time has not yet arrived for attempting to lay a *complete psychological basis* for education. Mental philosophy (as a science) is as yet too much in its infancy; it confines itself too much to a mere natural history of facts; it has but too recently taken up the more universal laws which connect mind with nature; it is, in fact, in every way too *incomplete* to play the part of a full-grown inductive science, out of which laws and rules of action can be deduced with any approach to *positive certainty*. Were I, therefore, to take up this subject with an artificial enthusiasm, and pretend to lay the foundation for a great

educational theory, based on the present results of mental philosophy, I feel I should only lead you astray. Those results, scientifically considered, do not as yet *reach very far*. The great value of mental philosophy at present, so far as I can judge, is its use as a mental discipline. It teaches us to turn the mind inwards, to analyze habitually our thoughts and feelings, to separate the matter of our knowledge from the mere form, to show us in all human truth what is the *product* of the age and the circumstances in which we live, and what has its basis in the unalterable laws of human nature. It teaches us, further, to rise above the tyranny of words, and strip them of their artificial power to govern us—to separate dogma into its primary elements, retaining the kernel while we cast away the husk; in a word, it teaches us to *think clearly* and *soundly*, and in place of being governed by opinions, to exercise common sense (however uncommon it may be) in analyzing and laying bare the elements of popular ideas and current doctrines. For all these purposes, I look upon mental philosophy as inestimably valuable, and could only wish to see it more systematically introduced into the routine of our higher university studies. But if any one imagines that we can regard psychology proper as a fully developed inductive science, that we can assume its conclusions as infallible starting points, and deduce from it a whole body of precept for the guidance of life and the culture of the intellectual and moral powers, I confess I cannot follow him to this extent, and cannot myself pretend to offer you a complete educational theory based on these conclusions.

I trust that you will not be disappointed with these confessions which I am obliged to make almost at the outset. It is a great thing in studying any subject, to know how far we may go with safety, what sort of conclusions we are entitled to draw, and where our pretensions ought to end. Whatever conclusions, therefore, I may come to after this, I hope you will, from the confessions now made, have the greater confidence that I am not likely to strain or overdraw them, that I am quite alive to the limits within which I can safely move, and that whatever application I make of mental philosophy to the subject of education, it

will be as aiding or confirming rather than *superseding* the results of our present experience.

Without any further introduction, then, I shall now proceed to enumerate a few of the results of modern psychology, which appear to me capable of some application to the theory and practice of education. These results may not be all of them quite familiar to you; but as the ordinary notions derived from the current philosophy of the Scotch or English schools do not admit, as I before remarked, of any broad application to subjects lying beyond their immediate range, I am constrained to select just those *wider* and less known principles which more modern research is now bringing to light. The *first* of these principles, then, to which I point your attention is

The hereditary transmission of mental qualities.

Within the last hundred years various theories have been propounded to account for the great variations of mental power, both in nations and individuals. The prevailing notion in the sensational schools of the last century was, that the mind is at first a *tabula rasa*; that all human beings start (individually considered) from the same point; and that the differences of mental qualities arise from the different contact they have with nature, or the different treatment they receive from other minds around them. This notion is now scarcely ever seriously maintained. It conflicts too obviously with facts to hold a place in human opinion, except under very peculiar circumstances, and has gradually disappeared from the pages of scientific writers, under the weight of existing evidence in favour of the hereditary transmission both of physical and mental characteristics. A more common idea is, that minds are originally created with varied endowments, which are received at once from the great first cause, without the intervention of any secondary laws. The tendency in modern thought to remove the immediate operation of the first cause farther from us, and to introduce the idea of evolution and development, has thrown this view of the case also considerably into the background. On the other hand, the facts which have been brought to light respecting

the origin of species, the influence of natural selection in modifying bodily powers and mental habits, the tracing of predominant characteristics and tendencies, as they appear in different races of mankind, to the influence of geographical position, climate, occupation, and circumstances—in a word, the gradual adaptation to its whole environment which is ever going on in all natural life, and in human life in particular; these and other similar facts have combined to show that there is some kind of hereditary transmission of physical and mental qualities from age to age, *some hereditary principle* which stores and accumulates power or function, thus giving rise to systematic advancement in human civilisation, progress in human thought, and development in human faculty.

It would not lie within either our compass or our purpose to go into all the far-lying proofs of this principle. I only name it as one of the results of philosophical thinking which has a direct application to human life. If minds are brought into being bearing within their original structure the stored results of past cultivation in the form of varied and differently graduated mental power, then must it follow that education, which provides for the *further* development of such power in the individual, ought not to be *uniform*, but should be adapted to the many variations of mind which nature and circumstances produce.

To take an extreme example. No one, I imagine, would suppose that exactly the same educational means were necessary to train up to mental maturity a young American Indian and a child of cultivated European parents. The natural tendencies and impulses in these cases being so diverse, a quite different system of means would be necessary to produce a given result. The same thing holds good of different types in our own country. The degenerated physique and blunted nervous system of the half-cultivated peasant of the west of Ireland, the sharpened perceptive powers and low moral development of the *London street Arab*, the sluggish brain of our own poor, ill-paid agricultural labourer, all show to a very striking degree the results of hereditary tendencies transmitted from parents and ancestors. Neither are these varieties confined to races and types. As

nature will sometimes concentrate in the individual all the best or all the worst qualities of fathers or forefathers, so even in the more developed, more refined, and more educated ranks of mankind we light perpetually on single cases which require individual treatment to correct positive errors or stimulate negative defects. The moral of all this in regard to education is, that we must not expect to produce uniform results from any *one uniform* educational system. Rousseau, in his day, tried to persuade the world (and nearly did persuade it) that the evils of society all arose from a false civilisation; and that we have only to go back to nature and educate accordingly, to bring society back to a healthy and perfect state. Unfortunately, he never defined what he meant by *nature;* and if he pretended to exhibit anything like a perfect specimen of natural education in himself, that specimen was certainly unfortunate, and the very reverse of being *persuasive.* But educational *doctrinaires* of a far higher character than Rousseau have stumbled into the same kind of error, and propounded some stereotyped system which, if carried out, they conceived, would infallibly lead in all cases to the same grand results. To all this psychology replies, It can lead to nothing of the kind. Humanity presents not one but a thousand educational problems, which no single system will solve. The real educator must not be a mere *doctrinaire,* but one who has a keen insight into human character, who can detect great faculties in their germ, and is alive to great defects; one, therefore, who, by probing the mental diagnosis of every pupil, can adapt his agencies to the wants of each. Doubtless the work must appear arduous in proportion as this view of the educator's duty prevails, but it is well for him to know the difficulties which he has to contend with in the outset, and not be disappointed when some of his most favourite and successful schemes end in failure and disappointment. Let him also be cheered by the thought that if he has to encounter the results of hereditary tendency coming down to him from the past, he is also creating a mind-force for the future which may, in like manner, be carried down as a civilising stream, to reappear in the higher life of generations yet unborn.

Let us, then, set down this as one principle gained from psychological science: that no uniform system of education *can* be uniformly successful, but that educational methods must be adapted, by a wise insight, to the varieties and consequent *wants* of individual character.

I will now state another psychological law which is of the greatest importance in relation to education, namely this—

That mental power of whatever kind grows and matures by the regular accumulation of properly adapted experiences.

This may seem rather vague at first, but will appear clearer as we proceed with the explication. Let me first show the working of the principle on the lower sphere of vital force, as an illustration of what I mean by it in the higher sphere of *mind* force. How is it that our bodily functions grow up to vigour and maturity? Physiology shows us that it is effected by a perpetual process of *cell-formation*. The primary germ of the human body, as of every other organized being, is the *cell*. The development of the body is effected by the addition of *cell* to *cell*, and this process of cell-formation is ever going on as physical power is required in different directions. The physical powers thus developed are always measured by the character and intensity of the cell-formation, and in this way are produced, one after the other, all the bodily functions necessary for life and wellbeing. But we must not suppose that when the bodily functions are all brought into a state of activity, the process of cell-formation is *concluded*. Far from it. Waste is always going on, new power has always to be created; and this daily creation of new power is simply a *continuation* of the same cellular process as that which guided the original formation of the organs themselves. Whenever additional power, therefore, is required in any organ, we may see clearly how it is produced. It is produced by *continued systematic exercise;* for continued systematic exercise, giving rise to regular wear and expenditure of power, calls forth the cellular restorative process into new vigour; and thus the intensity of the function increases in proportion to the regular and healthy repetition of the exercise itself.

I need not go into the proof of these physiological doctrines at present. They lie on the surface of the science, and are verified as well in our daily experience. Nothing is more sure and certain than that the regular, systematic, and properly adapted exercise of any bodily function *increases power;* and physiological experience steps in to show us that this increased power is produced by the intensified activity of the very same cellular process by which our bodily organism is constructed and its physical reparation always carried on.

Just in the same manner, mind-power is developed by the gradual accumulation of natural experiences. There is, in fact, a complete analogy between the growth of our bodily functions by the power of cell-formation, and that of our mental functions by the continuous addition of mental germs, until they are at length developed into a so-called faculty. In place of regarding the human mind (which has been hitherto usually the case) as consisting of a definite series of separate powers and faculties which grow up necessarily from our birth to their full maturity, it is far more in accordance with science and observation that we should regard it as one individuality, which is always developing power or function in different directions, according as such power or function is drawn out by the influence of circumstances and the accumulation of experiences. Some portion of this power, in the form of *tendency* to certain mental or bodily acts (as we have before shown), is *inherited;* but by far the largest portion has to be *created* by mental exercise and experience. In a short treatise which I published some years ago, on the *Outlines of Psychology*, I ventured to term these accumulations of experience *mental residua.* Dr. Carpenter and some others have termed them *substrata.* The German psychologists usually term them *Spuren*, or traces. Whatever we term them, however, their nature is equally plain and palpable. The phenomena of the case, briefly stated, are these:—When a given mental impression is produced upon us, it remains for a time before the consciousness, and then gives way to others. We know, however, that when it disappears it is not *absolutely lost;* for, if

the proper conditions recur, the impression is always *renewed.* The conclusion is, that there must be *something* deposited within us by each experience which *subsists permanently*, and which remains equally there, whether at any given moment it be the immediate object of consciousness or not. This something we term a *residuum.*

The fact, then, of the real existence of residua, considered as a phenomenon of our mental life, cannot be doubted. The question is, In what light are we to regard this fact? The most correct point of view, I believe, is this:—That every mental act which we perform, every experience we gain, leaves behind it, in the entire constitution of the man, a *tendency* or *disposition* to recur. Every time this recurrence takes place, the tendency in question becomes *stronger*, and the links of association more widely extended. A perception which we have experienced *once*, may possibly never have the opportunity of reappearing again in the light of consciousness. If we have had it twice, the chances of its doing so will be *doubled*; and just in proportion to the number of times, modified by vividness, that it comes up before our attention, will the disposition or tendency to recurrence become *stronger.*

In this way it is that we acquire a very strong power of perception in some particular spheres of observation, while the power remains equally weak in others; for wherever the mental acts have been repeated most frequently, the mental dispositions will become the most active, and the perceptive power will be the most perfectly developed. Every man becomes quick of perception in his own particular business; for it is exactly *here* that he is constantly accumulating residua, and increasing the facility with which his perceptions are awakened. The case is precisely analogous with any given kind of *action*, which is at first extremely difficult, but which becomes more and more easy to repeat, until we can do it as a habit, without the least forethought or attention. Thus the tendency shown by any mental act to recur, and that in exact proportion to the number and vividness of former repetitions, is a law which holds equally good in the sphere of our *intellectual* and our *active* powers.

The importance of this question, educationally, can hardly be overstated. If we really hold here in our hand the LAW by which our primary intellectual tendencies, dispositions, and faculties are *created*, then the work of the educator is well defined. See how it applies to our perceptive life. According to the law above stated, it is shown that we learn from our perceptions exactly what the mind is *trained* to learn there. A philosophical observer will see a thousand significant facts in the course of his daily experience which a careless observer will not see at all. Where large accumulations of residua have been formed by well-selected examples, all tending to the elucidation of principles, a *mind force* is created which is ever after called into exercise by every new perception bearing upon them. The educator, holding in his hand the law by which intellectual power is generated, has to bring all his efforts to bear upon the work of building up this power in the most important and suitable directions. An ill-educated mind may accumulate power in *useless* directions, *i.e.* may become quick and active in matters which serve very little good purpose. It is for the educator to see that the experiences daily accumulated tend to the elucidation of *fruitful truths* and *principles*. In this way he may create at once the love and the power of patient observation, of scientific research, of philosophical analysis, of moral reflection. Mental residua, wisely accumulated in any of these directions, cannot fail to increase and develope corresponding powers of mind, that consolidate into similar habits and tendencies of thought in after life.

Equally great, also, is the application of the law of residua to *moral* training. A mind trained to virtue will pass through scenes of vice without ever being tainted by them, just because there are no mental residua laid up with which those scenes have any affinity, and consequently no inward images of evil which they can awaken. The educator, be assured, has great power to regulate moral dispositions; but to do this, he must keep evil examples far out of sight, and must see that inward experiences are accumulated from the earliest dawn of reason, which shall turn the mental tendencies into the path of right thinking and right

conduct. It depends mainly upon *this kind of early training* what lessons are afterwards learned in the school of nature and of human life. A fatal facility towards the reproduction of false or evil ideas, when once formed, can never be wholly eradicated; for the residua, once created, can never be wholly destroyed. The only chance of antagonizing them is by attempting to accumulate stronger tendencies in another direction. On the contrary, we may be equally certain that dispositions to right thinking and right conduct, when once formed and laid up as so much *mind function* within us, will never be lost. Even though afterwards overgrown with evil, the springs are still there, and may be touched when least expected. The very same tendencies, moreover, which are thus created by educational agencies in the *individual*, may be also cultivated on a large scale in the nation. What is termed *common sense* in a nation, is nothing but a substratum of unconscious experiences out of which our judgments silently flow; the whole course of public opinion is really guided by accumulations of mental residua which are tacitly built up in the course of national education, and perhaps only come prominently into consciousness long after they have been *really operating* and shaping the events of human history.

Here, then, we have another great educational principle deduced from psychology, that mind function in any direction, whether intellectual or moral, may be created by a wisely-formed and well-connected accumulation of experiences in the mind of the pupil.

We come now to a third very important principle in psychology, and to which I shall crave your close attention, viz.:—

That similar experiences laid up in the mind as residua, coalesce, *and blend together into one* united whole, *thus creating a special mental power in any given direction.*

This is simply a further development of the doctrine of accumulation which we have been just explaining. To give an example of what I mean, let us place before us mentally some large object, as a cathedral or a mountain.

If we only see it *once* and then try to recall it, we shall probably find that the residuum it has left behind is *weak* and *indistinct*. If we gaze on it *long* or *often*, we obtain a great many different points of view; each point of view leaves its trace in the mind, and the whole of these traces then *blend together* into one vivid and distinct mental image of the object in question. Here a very important principle is involved—namely, that when numerous residua of one and the same object, or of similar objects, are accumulated and coalesce, the resulting mental perception will, in ordinary cases, be *strongly* and *readily reproduced*, just in proportion to the number of residua which enter into it. And here you will observe that we get an important insight into the mode in which our *perceptive* power is constructed.

The reason why the first perceptions of infancy are weak, arises from the fact that very few residua have *as yet* blended together in the mind, and that a new impression, consequently, has very little power of appealing to or calling up any large amount of former experience. The process of combination, however, begins very early, especially with regard to those objects which offer the most constant materials for observation. Hence the perceptions of the child, at first dim and uncertain, soon become, within its own narrow circle, very vivid and distinct,—the more so, of course, from the limited range of materials which as yet occupy the consciousness. If every perception received were to remain *distinct*, the knowledge resulting from our external observations would consist of an infinite number of weak and evanescent impressions. As the mind, therefore, grew more mature, and the impressions received by it more varied, our knowledge would naturally tend to become infinitesimally minute and proportionally confused. This result is obviated through the working of the law by which similar residua blend into a certain number of generalized and classified perceptions. By means of this law, our experiences instinctively arrange themselves under *certain heads*, the multiplicity of our impressions blend into *combined images*, and *classified perceptive* knowledge is the result. Every new perception subsequently acquired can now appeal to some mass of already accumulated experience, which draws it

afresh into consciousness, and then blends with it into one whole. This accounts for the fact that the most fragmentary perceptions of objects spontaneously complete themselves in our consciousness. The small surface of colouring which the eye takes in when we look upon a distant church or mountain or landscape, awakens the whole mass of collateral and connected experiences hitherto accumulated, and thus builds up, as it were, the entire object within the consciousness in all its minuteness and detailed reality. Now, add to this the fact that residua manifest themselves as so many tendencies to recurrence, and it follows that the larger their accumulation in any direction, the stronger that tendency becomes. Thus, men passionately devoted to any given branch of knowledge find food for observation everywhere. They have an eye for a thousand similarities which wholly escape the ordinary observer, and every object connected with their favourite studies touches some link of association, blends with some former experiences, and thus goes to increase at once the breadth and minuteness of their knowledge. Whether Newton first conceived the law of universal attraction from witnessing the fall of an apple, I do not pretend to say; but the assertion, if not true, is still well adapted to illustrate the mental fact we are explaining, showing us that when there is a *large number* of mental experiences blended together in reference to any conceivable subject, the mind will draw into it every fresh illustration, and complete its knowledge from the most insignificant and fragmentary intimations.

Here, then, is another great *engine* which the educator holds in his hand. If brain power or mind power (whichever we choose to call it) can be built up in any particular sphere of knowledge or action by the accumulation and blending, as it were, into one mass of an indefinite number of similar experiences, all tending to the same point, then how vast becomes the importance of clear, correct, and logical teaching—teaching which keeps apart all associations which would tend to confuse the thoughts of the pupil, and to bring together all the most important facts and considerations which bear upon great truths and living principles! For what are great human truths but the combined result,

the quintessence, as it were, of numberless experiences well chosen and arranged, all illustrating some great principle, all maintaining some great doctrine, until that doctrine is made at last to stand out to the mind in clearest relief. And this imperishable service the teacher can offer to his pupil, when he has helped to surround him with mental associations, multiplied illustrations of a truth from every source, and thus made the whole blend together in the creation of one great, overpowering conviction. All our convictions, believe me, come to us really in this way. Whether they belong to the domain of science, history, morals, or religion, the subjective process of formation is the same. A few instances, culled here and there, and interspersed with other materials, will never consolidate into a great mental fact, guiding thought and conduct; but take a vast number of instances, collect them from every quarter, show that they all bear upon one and the same truth, and see the result. As these similar instances accumulate, they all blend together more and more firmly in the mind of the pupil, each succeeding one adds new force and intensity to the whole, and the whole, when consolidated, constructs the great elements of character which govern the whole man, and guide at once his thinking and his action. Mental, moral, and volitional power can thus be alike formed and intensified by wise teaching—that is, by the due accumulation of mental experiences all bearing upon those special convictions which it is the great purpose of the teacher to instil.

We may set down this doctrine of the blending of similar residua into one great mental power, as another psychological gain to the interests of true education, warning the teacher against discursive instruction, and showing him that to produce living convictions in the pupil, he must proceed logically in the selection of facts, truths, principles, which bear upon them, and blend together at last into one great focus.

We come now to a fourth very important point in psychology, namely,

The nature and cultivation of the memory.

It is popularly taken for granted that memory is a separate, irreducible, and consequently original faculty of mind, which is born with us, and has to be strengthened simply by exercise. This, we shall see, is a very imperfect, and, indeed, fundamentally inaccurate view of the whole question. The nature and constitution of memory results naturally from the facts I have already laid before you, in regard to the formation and conservation of mental residua. Every mental experience leaves a permanent trace behind it. This is the fundamental fact of memory. No one of these traces, we have good reason to believe, is destructible any more than a single atom of matter or a single development of force. The residua we are constantly storing up may remain separate, or may blend together into groups; but in every case they continue to exist, and may be called back into consciousness at *any moment* whenever the right spring is touched, and the proper conditions for bringing them back recur. The whole of the facts of memory are really involved in the conservation and reproduction of our mental residua; and the point we have now more especially to consider is, how this power of reproduction can be cultivated and secured—so secured as to bring it to a large extent even under the immediate power of *volition.*

Now notice this great fact of our mental constitution, that we can only exercise a voluntary power over those mental states in the construction of which the mind itself has been consciously active. A sensation, an emotion, an immediate perception of some present object, we can never recall as it at first existed. We had nothing to do consciously with their original production, and we can never experience them a second time except by the concurrence of the same external circumstances which first called them forth. Not so, however, with those mental states which are the result of the mind's free activity. Where this activity has been largely at work, even in our *perceptions*, we can to a large extent recall them. Let some striking object be presented to us in which we are interested, such as a piece of architecture or sculpture, and the mind at once sets to work to master and comprehend it. It seizes upon this feature and upon that, lets the more uninteresting points

sink away from observation, and brings the more interesting ones forward into especial prominence. It compares one part with another, separates here, unites there, and constructs for itself a mental image of the whole, which, though occasioned by the objective reality before us, is still mainly the work of the mind's own free and conscious activity. Here, then, memory can find its proper materials. What the mind has constructed, the mind can to a large extent *recall;* and we must now consider for a moment how it is that it *can* be recalled, and what amount of volition we can exercise over the whole process. First, there can be no doubt but that the laws of association have much to do with the whole fact of mental reproduction, for those objects are most easily recalled with which we can form numerous links of association in the mind. But the laws of association work *blindly* and *involuntarily;* they cannot account for voluntary memory, or explain in what way *recollection* can become *a duty.*

Another thing, again, which has much to do with memory, is *attention.* What we attend to closely, we can remember far more readily and perfectly than what we hold before the consciousness only vaguely for an instant and then dismiss. But this is only another way of stating the fact already noticed, that we remember only in proportion as the mind's free activity is engaged in the production of the image or idea which is to be recalled. Attention *alone* does not suffice to explain all the peculiarities of the case. We often bend all our mental energies to a subject, and make a great effort to retain it; but still all our efforts prove unavailing. The memory proves treacherous and incompetent, the subject leaves a confused impression; and in proportion to this confusedness, it escapes the mind and baffles all our endeavours to recall it with any degree of vividness or minuteness of outline.

This brings us, I think, to the consciousness that the power of recollection greatly depends on the order and arrangement of the ideas, in the midst of which the object of our memory stands, and to which it is related. No one with any amount of attention, for example, could retain a perfect recollection of all the stars and groups of stars as

they appear in the sky, with no further mental activity exercised upon them than a mere stedfast gaze. But let some principle of order and arrangement be brought in, let the groups be classified and the relative positions marked, let the whole firmament be mapped out on some intelligible principle, and a clue at once is given by which well-nigh the whole can be retained in the memory, and the separate parts at any time recalled. And what is true here is equally true, according to its measure, in every other case. Nothing we see, hear, or think of exists *alone.* Everything stands in the midst of a system of ideas, of which it forms a part; and it is by consciously surrounding it by a network of such ideas, all duly arranged and ordered, that we are enabled to go back to the exact point in the system where we shall be able to recover any given portion and bring it back to consciousness. We will suppose the object we wish to recall to be a phenomenon of nature, one, *e.g.*, out of the thousand facts which chemical science presents. Here the chance of retaining one out of such a multitude appears very small. But the fact in question stands in a system of cognate phenomena. We know the elements which are at work; we know their properties, we know the effect of their relative combinations, and then the given phenomenon comes before us merely as one particular example amongst a series of causes and effects, of which we well know the beginning, middle, and end. This being the case, we can pass mentally along the series, from any point, until we come to the fact itself, and thus lift it, as it were, out of the whole network of ideas by which it is surrounded. In regard to the affairs of human life, the very same principle holds good as in the objects of art and science. The duties which devolve upon every one of us form, as it were, a system of *agenda* which must be present more or less to the mind of every practical and thoughtful man. We know well that if due attention be directed to the whole *system* of duties belonging to us, and proper order of connection be established amongst them, it is morally impossible that anything of magnitude and importance can, under ordinary circumstances, be forgotten. Thus memory, you perceive, is drawn *of necessity* into the sphere of human duty. To

overlook an engagement, or forget an obligation, shows that there must be a *culpable neglect* somewhere. It shows that the mind has voluntarily dismissed such obligations from its attention, or that it has failed to entertain such a sense of human duty as to induce it to form for itself a system of practical activity in which every duty shall find its place, and thus present itself in proper order to the memory whenever its fulfilment is demanded. The power of memory may thus be represented to us under the figure of a *spider's web*, which sends out its threads in all directions, establishing connection with every part, and with the central point of the whole. Most important is this whole view of memory from an educational point of view. It shows us in what way we must proceed in order to fix any important truth indelibly on the mind of the scholar, and enable him to recall it at will. Whatever be the fact or the truth which the teacher wishes to convey, he must establish some *connection* between it and other well-known ideas. For this purpose the teacher will not merely *enunciate* what he desires to convey to the mind of the pupil, but he will *question* and *cross-question* upon it, to see whether or not it exists to the scholar as an *isolated fact;* and if so, whether he cannot link it by numerous ties to other ideas, and work it up into his whole system of instruction, so as to multiply the bridges across which the mind may return to it at any future period. Thus, you perceive, the cultivation of memory, instead of implying the mere exercise of a single faculty, depends more than anything else on the establishment of order and connection in our ideas. To cultivate it successfully, we must inculcate some kind of system in our thoughts; in fact, the whole habit of memory is almost equivalent to the habit of order and method, and it is thus, and only thus, that its cultivation and its due development can be brought strictly within *the scope* of the teacher's influence.

There is yet, fifthly, *one other* great psychological principle to which I must refer as having a very direct bearing upon education, and that is

The law of the association of ideas.

To explain this, let us go back for a moment to our starting-point, viz. the accumulation of mental experiences, or, as we have rather termed them, the storing up of mental residua. Where these residua possess *similarity*, a process of blending goes on until great mental convictions are constructed (in the manner above explained) from the concentration of mind force thus created. But observe that numberless residua are constantly being formed in the mind which are altogether DISSIMILAR. In this case the process of blending does not take place; but, on the contrary, a constant *action* and *reaction* of ideas sets in as to which shall take possession of the consciousness and come up before the mind's attention. Ideas in the mind, so far as they are incapable of blending together, are related to each other somewhat in the same manner as antagonistic forces. When one occupies the consciousness, it can only be displaced by a second, on condition of the latter possessing for the moment a greater force; and then this latter, in expelling the former *from consciousness*, loses a portion of its own force equivalent to that which it suppresses. Now the power of association between any two ideas in the mind is represented by the amount of force which the one has expended from time to time upon the other. Two dissimilar ideas, which have never acted or reacted in any way upon each other, can have no inward connection or association. If they have, on the other hand, been brought into mental collision, the one displacing the other, and the latter again, perchance, gaining ground, and repressing the former in its turn, then a close *association* is formed between them, which leads to their future habitual connection in the play of consciousness. Thus, if while gazing on some particular object,—say one of the pyramids of Egypt,—the perception of it has been displaced by the sudden and unexpected appearance of a friend, an association between the two will be established, the one will always recall the other; and this association will be strong in proportion to the amount of force which has been expended, either at one time or at different times, in their mutual action and reaction on each other. The strength of association, therefore, may be stated as equal in amount to the action and reaction of the associated ideas.

The objective laws of association are pretty generally regarded as the following:—(1) The law of similarity and contrast; (2) The law of contiguity in time and place; (3) The law of logical connection; and (4) The law of cause and effect.

If it be asked, How do similarity, contiguity in time or place,—or, How do logical and causal relations,—bring our ideas into *collision*, and establish a mental association between them? the simple answer is, that they do so by *forcing* the mind's attention to concentrate itself for a time upon them. I may see the same two objects together a thousand times; but if my mind is fully occupied, and my attention absorbed, no association will be formed. I may see the same *sequences* occur as frequently as possible; but if I never observe them attentively, they will establish no connection with each other in idea. The power of attention, then (attention, voluntary or forced), is the primary subjective ground of association; for it is in proportion to the *fixedness* of our attention, produced either voluntarily or by overwhelming outward circumstances, that ideas come into collision with each other, and enter upon the process of mutual action and reaction.

Now, observe, it is mainly these associations of *things* and ideas with each other which form what we may term the *whole body of human experience*—that is to say, it is when things associated in nature or in the economy of human life become similarly associated in our own minds, so that we understand and can foresee their connections and sequences, that we can be said to possess a fund of experimental knowledge. Men of little experience are men who have formed very few useful and fruitful associations. They have been, perhaps, recluse in their habits, shut up within their own thoughts, inattentive habitually to things around them; their education, perchance, has been loose or unpractical; and their associations, in place of coinciding with the natural connections of things without, have been confined to objects which have really little to do either with nature or human life. Such men we term variously men of *no* experience, men of deficient judgment, men of ill-regulated intellect, men who, with all the learning they sometimes

possess, exercise but little common sense, and show little capacity for the business of life.

Our knowledge of men and things, our knowledge of human truth, our knowledge of the connections existing in nature, our knowledge of the tendency of events, our knowledge of science, of history, of everything practically valuable, depends more than anything else upon the *manner* in which our ideas have been associated together, and the closeness with which our inward connections of thought have been made to resemble the outward connections of things. Here, then, is a fruitful topic of consideration for the educator. When teaching is indefinite and loose, the associations between facts and ideas formed by the pupils must inevitably be loose and indefinite also. The true teacher should himself be a man of large and sound experience. If he teach *science*, for example, he should well know the connections between phenomena, and be able to lead the minds of the pupils away from a distracted habit of observation to the due perception and appreciation of natural laws. If he be, again, a teacher of history, he should have large knowledge of human nature, and lead his pupils to comprehend the characteristic tendencies of human actions on a large scale. Whatever he teach, he should aim not so much at curious recondite and unpractical research as to train the judgment and guide the associations in all those questions which lie nearest to us in nature and in everyday life. I know that all this is far easier said than done; but my present purpose is to point out what should be aimed at, if not fully accomplished, and to give some idea as to the bearing which the psychological principles we have been considering, if faithfully applied, would have upon the tendencies and methods of modern education. We may lay it down, therefore, as a doctrine amply supported by psychological observation, that the more close to nature, and the more strictly connected and logical our teaching becomes, the more valid and wholesome will be the entire result.

There are two or three important psychological doctrines which I had intended to bring forward in the present lecture, had it not been that their due consideration would occupy

more time than could at present be devoted to them. I had intended, for example, to refer you to the philosophical nature of words as signs of ideas, and to show how the study of them tends to enrich the mind, and aid it in the comprehension of the ideas themselves. I had also intended to refer to the cultivation of *volitional* power, which is in every way as important, educationally, as is the cultivation of the more purely intellectual faculties. In fact, the want of volitional power is far more frequently the stumbling-block in the way of mental advancement than the want of intellectual capacity; and there is probably hardly one of us here present who does not feel *conscious* that he is *intellectually* capable of almost any amount of acquirement, if he could only brace his mind well up to the effort. These and some other points, however, I must leave for the present, hoping to have occasion in one or other of our succeeding lectures to return to them in some more applied and practical form.

There has probably *never* been a time in the history of our country in which the whole problem of education has lain open more readily for revision than the present. Hitherto we have been following more or less closely in the paths of tradition. Our instruments, models, and methods have come down to us mostly from the age of Greek and Latin civilisation; and as they were employed in the Middle Ages, so they continue in force more or less to the present day. Considering that education is mainly empirical, this is not perhaps to be wondered at. The *artistic* and *linguistic* refinement arrived at in Athens was certainly more *perfect* than anything which has been developed *since that time* in the history of the world. But this was not arrived at by any of the methods we now employ. With the Greeks there was no study of language beyond the study of their own; there were no models of style drawn from foreign peoples and nations. They nursed and cultivated their own genius, and never sought to take lessons from that of *their neighbours*. It is certainly a grave consideration for us, whether this is not *after all* the *true* method of national culture; and whether we, in common with most other European families, have not suffered from the comparative

contempt thrown upon all genius indigenous in the people, and the extraordinary value attributed to the cultivation of ancient learning. Certainly, if we value Greek models beyond every other, we ought to consider how far it is wise or reasonable to follow the exact *contrary path* which they followed in attaining to that pitch of culture which we, it seems, can admire and imitate, but *never reach.*

The Romans drew *their* culture mainly from Greece. They began the method of neglecting their own *genius* in favour of foreign models. No doubt they studied these models to good purpose, and founded a wonderful literature upon them; but the Roman literature inevitably bore upon it that *secondary* stamp which arises from imitation, and wholly failed to reach that *perfect form* which characterized the models after which it strove.

As the Roman age *declined*, and the bases of modern nationalities arose, the imitation became still more slavish. Whatever culture there was developed in the Middle Ages, it not only failed to bear upon it the *fresh stamp* of originality, but it was still more closely drawn from the Roman literature than the Roman itself had been from the Greek. In other words, it was not only an *imitation*, but it was the imitation of an imitation; it was not only framed upon a foreign model, but took for its model that which was itself derived from a previous model. It is little to be wondered at, therefore, that the Middle Ages were so destitute of literary distinction; and that whatever sparks of genius did illumine the surrounding darkness, they only flashed out here and there from the rough efforts of native genius, where Latin was unknown, and imitation therefore *impossible.* Surely the genius which invented the Gothic architecture was *capable* of distinction in other spheres of art as well, and would have produced a corresponding literature, had not all acknowledged mental culture been confined to mere imitation.

Notwithstanding all this, the prevailing methods of education in the European seats of learning of modern times have for the most part come down traditionally from the Middle Ages, and are only superior to them from the fact of our having gone back once more to the original Greek models,

of which they had lost sight, and thus approached so much nearer to the fountainhead of classic *life* and *culture*. But the question is now fairly opened, how far the higher education of the future is to be bound by the laws and usages of *classic tradition*. There are many other means and appliances which are now beginning to enter into competition with the older methods. Science, which was a mere blank in the ancient world, has become one of the great characteristic features of our modern intellectual life, and offers a means of mental cultivation which was before almost entirely unknown or ignored; while in the department of literature proper our native Teutonic genius is beginning to challenge for itself a place side by side with the productions of Greece and Rome. The battle of these various educational agencies is one which has yet to be fought, and which will assuredly *be* fought upon the field of modern culture. It is of some importance, therefore, for us to find out how far the results of mental philosophy may assist us in the educational controversies of the future. It can hardly fail (so far as it is a philosophy *at all*) to have *some bearing* upon them, and if I can succeed, in this and the following lectures, in pointing out the way in which psychology can enter in any way into the contest, and throw light upon the great questions involved in them, the few hints I am enabled to offer in this direction will not, perhaps, have been thrown out before you wholly in vain.

LECTURE II.

IN my last lecture I brought forward various psychological doctrines which seemed to me to have an important bearing upon the methods and processes of education. In the present lecture I wish to proceed somewhat more *systematically*, and to take a kind of *rough inventory* of the human faculties, noting as we go on what are the means and appliances actually and habitually employed for their cultivation and development. In doing so, we may have occasion to *criticise* these appliances as well as *explain* them, to show how far the methods employed are well grounded, and here and there to hint at improvements.

Without, then, going into any discussion on the matter, I may, first of all, observe that there are three great classes of mental facts generally admitted amongst almost all psychological writers, and usually termed mental *faculties*,—these are the *intellect*, the *will*, and the *emotions*. I need hardly remind you, after what has been already explained, that these are not to be regarded as *separate* and *independent* faculties. The mind—the whole mind—is really in them all. They merely indicate certain predominant forms of mental action, which at one time or another come into play with especial emphasis, but which by no means *exclude* each other. So far from that, we could exercise no will, properly so called, without intelligence, no intelligence (at any rate, of a higher kind) without volition, while the emotions in their turn involve an intelligible object and an effort of the will to attain it.

Now, the purport of a complete education must be to act beneficially upon each and all of these three modes of

mental manifestation—that is, to develope the intellect, to give power and control to the will, and properly to train and discipline the emotions. Whether these three objects have been duly attained or not, just makes *the* difference between an educated and an uneducated mind.

We begin, then, with the development of the intellect.

The general direction in which the human intellect developes is by no means difficult to trace. It deals first with the external world, *i.e.* it is employed for a time almost exclusively in observing and mastering the phenomena of the senses; from this it proceeds to the formation of ideas, and to the storing up of a vast variety of mental images, drawn from every possible quarter. After a fund of ideas has thus been constructed, then succeed what may be termed more strictly the *logical processes*, abstraction, judgment, and reasoning. All this leads, at length, to the exercise of the higher reason, *i.e.* to those combinations which enable us to construct knowledge and grasp truth on a large scale. We shall follow the development of the intellect, therefore, through these four ascending phases:—(1) Perceptions, (2) Ideas, (3) Logical Processes, and (4) Reason in the higher sense of that term.

I. PERCEPTIONS.

We begin, then, with the sphere of our perceptive life. And here we must notice in the outset, that nature herself provides for the culture of the senses and perceptions by means of the environment in which every one is necessarily placed. We learn the use of the senses instinctively. The power of perception, as we saw in our last lecture, has indeed to be acquired by the accumulation of experiences; but the material of those experiences lies so largely around us that every one acquires this power of necessity, so far as his own circumstances and environment admit. The savage, *e.g.*, who lives wholly amongst his native forests, naturally learns to perceive *most acutely*. His senses are trained by the life he leads to supply the especial knowledge which that life requires. But in civilised life we want our perceptions trained quite differently. We do not require to track our way through immense forests, to find our paths

and directions from minute indications, to observe the traces of our prey where ordinary eyes would never surmise them. All this is *necessary* to savage life, and nature trains the senses accordingly. But in civilised life we have no use for this kind of perceptive power; while, on the contrary, we need to perceive a thousand things which the savage does not learn to see at all. The eyes, the ears, the organs of smell, of taste, of touch—all have to accommodate themselves to the objects and the multifarious uses of our daily life. Our practical activity, our health, our usefulness, our adaptiveness to all the ordinary wants and duties of life, depend in great measure upon the proper use of the senses. Imagine any one of these senses taken away, or observe the deficiencies of those in whom any one of them is wanting, and we soon become conscious of the large part which each of them plays in the present civilised state of human existence.

As, therefore, so much of our knowledge and usefulness depends on a right use of the senses, it follows almost self-evidently that our perceptions should be trained and educated so as to render them as largely available as possible. Nature only trains them within the sphere of each person's own immediate experience; but education can combine the experiences of a hundred individuals, and thus train the perceptive powers to a much larger scope of activity than any *one* could naturally acquire for himself. Half the productions of the globe can be concentrated within the schoolroom, either in reality or by pictorial representations; and with these, the perceptions can enjoy an elementary training in the hand of a good and a graphic teacher which may prove of inestimable value in after life.

But how is this primary perceptive teaching to be begun? how to be carried on? The true method by which perceptive teaching should be regulated is shown, I think, in the natural activity of *childhood*. A very young child cannot sit down on a bench and listen with any profit to a lesson. His knowledge of words and his powers of attention are not sufficiently matured to admit of his doing so either with pleasure or profit. He wants rather to be in *motion*, to be trying his nascent powers upon all the objects with which

he is surrounded; he learns by effort and experiment, not by explanation, and loves to be in perpetual conflict with the forces which nature opposes to his own. This is the method which nature herself points out. The young untutored Indian finds the use of his perceptive powers by *using* them; the child of civilisation must begin in the same way.

This is the idea which lies at the foundation of the system of infant instruction originated and developed by Frœbel, and usually known in this country under the appellation of the *Kindergarten*. The child receives *a gift* before he is out of the nurse's arms, on which his first physical powers are exercised; when a little older he receives a second gift, which calls out a somewhat higher degree of activity. Each succeeding gift is adapted to cultivate the powers of perception, by giving the scholar something more to do, to construct, to arrange, thus affording systematic exercise in the judgment of form, of colour, of order,—such judgment being requisite in the very performance of the required actions. There is no doubt a correct psychological principle lying at the base of this whole system. The only thing to be carefully observed is the time at which the habit of learning by activity should cease, and severer habits of mental attention be assumed. As a preliminary training for the perceptive powers, however, nothing I conceive can be *better adapted* to call them forth into wholesome exercise.

As the powers of perception become more advanced, they must naturally assume a more intellectual phase, and require a more intellectual method of development. Then comes in the use of what are generally termed *object lessons*, the purpose of which is to train the scholar, through the use of the senses, to the proper comprehension of all the qualities of real objects in nature, to understand their combinations and appreciate their value in human life. By bringing together the most striking productions of the natural world, by placing them in contact with the organs of sense, by accompanying such experiences with explanations of their utility, a large amount of useful knowledge can be conveyed, and the perceptive powers trained to get still more

knowledge for themselves. The danger here to be avoided is that of running into perpetual repetition and tautology. *Objects* are far more numerous than the *qualities* which they represent, and the whole list of such qualities becomes familiar to the scholar before a tenth part of the objects presented to his notice is exhausted. The object lesson is then apt to become tautological, *trite*, and consequently dull and useless. The teacher should know instinctively when this point has arrived, and then proceed at once to a higher and more advanced form of perceptive instruction. Many teachers, instead of this, try to keep up the interest of the scholars by putting their questions in the form of enigmas, and keeping them alive by the effort to guess them. As soon as any artificial stimulus of this kind is necessary, the object lesson should be dropped.

I do not mean that perceptive teaching can be so soon abandoned altogether,—far from it. Teaching by words *long* requires to be refreshed and enlivened by perceptive illustrations. For words, be it observed, are but the signs of ideas, and not ideas themselves. For a word to have any real meaning and force, there must be a corresponding group of mental residua which the sign, when used, has the power to awaken. Where such residua have not been accumulated by means of actual perceptions, the force and meaning of words is apt to be feeble and indistinct. Every child will have a perfectly clear idea attached to familiar words, such as horse, rose, garden; but take words which signify objects he has heard of but never seen, such as a lion, a palm tree, or a glacier, and the images awakened will be very different in different minds, and *in all* more or less indefinite. Bring these ideas or images, however, to the test of *actual perception*, let the scholar see a real lion, or a real palm tree, or a real glacier, and those mental images will be at once corrected, sharpened, and refreshed; and the teaching which is based upon them will be proportionally effective and permanent in its results.

All teaching, therefore, except in the case of purely abstract subjects, may be more or less *enlivened* by having recourse to perceptive illustrations. Even in subjects as remote from the senses as arithmetic and geometry, such

illustrations are by no means useless; for many a mind that has a difficulty in grasping, say, the nature of a fraction, or the truth of a simple proposition in Euclid from the abstract statement of it, may be helped to its fuller comprehension by means of those perceptive illustrations which have been invented by some ingenious teachers for the purpose. The intuitions of number and space are naturally much stronger in some minds than in others, and where they are weak, they must be aided by educational *machinery* such as that just alluded to.

And if perceptive illustrations can be turned to account in such subjects as arithmetic and geometry, much more will this be the case in teaching things of a less abstract nature, such as geography and history. Every one must have felt, more or less, how little effect it has upon the mind to store it with a catalogue of *names*, *places*, *dates*, and *events*. Take a young intelligent scholar on a journey from England to France, Switzerland, Italy, and back by Vienna, the Danube, and the Rhine; then open his geography of Europe, and unroll the maps of each country. How different does every name on the book and every feature marked on the map now appear to him! The ideas he had before formed have all been corrected and refreshed by the actual perception of the things they were intended to represent, and the subsequent teaching based upon them will have tenfold the force and interest it had before. Now, as it is, of course, impossible to teach *geography* by taking our pupils all over the world, the next best thing to be done is to bring the world, by means of pictorial and other concrete illustrations, as near as possible *to them.* The mountains, rivers, and coasts they *do see* may be the starting-points from which the teacher may make *all other* mountains, rivers, and coasts graphic and intelligible to them. He will be also aided in doing so very greatly by good *pictorial* representations and clearly-defined maps, more especially those more modern ones in which the elevation of the countries is made almost visible to the eye.

But I need not take up your time by any detailed explanations of the value of perceptive illustrations. Every practical teacher is already well acquainted with the subject,

and has applied it in a hundred different ways; all I want to show you at present is, that the principle on which perceptive teaching is based is psychologically both a true and an important one. The principle, briefly stated, is this, that words only become forcible and permanently instructive to us in proportion as they are based upon corresponding mental experiences, and can, when employed, awaken residua already laid up in the mind. Where such residua do not already exist, they must be created; and where they are feeble or indefinite, they must be sharpened and refreshed by an appeal to the senses, or by teaching of a graphic and, if I may so express myself, of a pictorial character. Moreover, half the ordinary occupations of human life require the eye, the ear, or some of the other senses to be trained, so as to awaken and develope the fundamental instincts of correct form and colour, and the correct combinations of both in the production of artistic harmony and due proportion. The proper appreciation of these things by the senses has a closer relation to the progress of civilised life than we are apt to imagine. For harmony in our perceptions has a close relation to order and harmony in our ideas, and the sense of beauty awakened even in the lower spheres of mental action will spread its influence upwards, till it influences and educates our whole moral and intellectual nature. Hence, too, the value of educating the public mind by giving free access to objects of natural and artistic beauty. The mere habit of observing the difference between what is really artistic and refined, and what is tasteless and vulgar, is an action which sinks deeper into the soul than we are apt to imagine; and judgment, once called forth by manifestations of beauty in form, and colour, and expression, will soon impart its influence to all the other spheres of human life.

There is one question, both curious and important, which naturally arises here, and that is the relation which *language* holds to the mental development of the child in the early perceptive stage of his existence. No one can have observed attentively the phenomena of childhood without seeing how ready and intense is the capacity it possesses of appropriating words and gaining the instinctive use of language to express

its ideas. Words, in fact, regarded as spontaneous signs, form the great instrument of the child's early mental development. Without them its incipient ideas could not be fixed, could not be retained, could not be reproduced. Sensations flow in upon the young mind with an infinite multiplicity of effects. It is only when effects of a similar kind blend together and are fixed by a term that a clear idea can be produced. A hundred red objects, for instance, may have been seen, but it is only when this one quality is denoted by a word or sign that the quality *red* can be separated from all the different subjects to which it belongs, and contemplated as a quality by itself. A hundred plants of all sizes, shapes, and colours may have been seen blossoming in the fields, but it is only when the word '*flower*' has been grasped, and its meaning appropriated, that all these natural phenomena can be comprehended intelligently in one generalized idea. Words are not merely the signs of things, they are also the instruments by which all our general and abstract ideas are framed. Hence language is the exact *reflex* of our ideas, and is instinctively learned and aptly employed by the child exactly in proportion as its ideas enlarge and develope. Each language, moreover, possesses a character of its own, which is the product of the national life, and perfectly answers to the peculiar hue of thought and feeling which that national life has developed. Every child, accordingly, in appropriating by instinct its mother tongue, enters into its own national inheritance of sentiment and idea; and the more perfectly that tongue is acquired, by imitation and example, the more thoroughly is the mind imbued with it. It is of great importance that nothing should interfere with this natural process of mental development in early life. Such interference may arise in two ways, either by the scantiness and poverty of the language which is presented to the child's perception, or by the mixing up of foreign elements which have never sprung out of the national life and have no affinity with it. The first of these instances occurs in the case of the children of the ignorant and uneducated classes, whose words are confined to an extremely small vocabulary, and that often ill used and misapplied. The second of these instances is

produced by the noxious habit we often see of putting infants under foreign nurses, and teaching them to babble scraps of French or German or what not before they have yet acquired the use of their mother tongue. If it be true that words are the machinery for mental development, and that every language has a type and character of its own, then it can hardly be otherwise, but that a mixed and hybrid type of speech impressed upon the mind in its first nascent stage of intelligence should produce a blurred and indistinct impression. The perfect, unmixed, unadulterated use of one distinct language involving one clear national type of sentiment and idea, is of *the highest importance;* it aids clearness of conception, originality of thought, and sharpness of expression. Bilingual people scarcely ever give rise to anything like a national literature; and those who, like the Russians of the higher class, accustom their children to speak with foreign governesses and tutors from the cradle, are simply quenching from the earliest childhood every chance of national and original genius. No literary production of any value ever has, or probably ever will spring out of a race thus educated; and if any original literature do arise in the country, it will certainly spring, as it has to some extent done already, from the lower ranks of life, where the mother tongue has been the sole organ of speech and the sole medium of mental development in early childhood.

Perceptive instruction, moulded instinctively into ideas by the use of one distinct language, is the only proper mode of early training. When the mother tongue is fully acquired and its use completely appropriated, then the study of another language can be properly introduced, and profitably used as a basis of grammatical and linguistic instruction.

II. IDEAS.

So much, then, for the primary form of intelligence which is represented by the phenomena of perception. We come next to the region of *ideas.* By ideas I intend to express those permanent, abiding, inward images which the mind constructs by its own natural activity, chiefly out of the material presented to it by the senses. I need not enter at

present into the mode of their construction. This was sufficiently explained in our last lecture, when treating of the *blending* of *residua*. Suffice it now to remind you, that similar experiences *coalesce or blend together*, and so give rise to what we may term *generalized perceptions*. Thus the idea we form of a mountain, a river, or any other object is developed out of the whole blended mass of experiences which we have gained from time to time of the object in question, the mind seizing upon the most prominent features and shaping the *form* which the idea assumes by its own free activity.

The great primary difference between an educated and an uneducated man consists in the number, the variety, and clearness of their respective ideas. Nature, of course, provides for the development of ideas in the case of every individual within the range of his own immediate experience; but if left simply to nature, the range of our experience is small, and the mind's activity in seizing on the elements presented in experience is rude, imperfect, and ill-directed. Here, as in so many other things, nature requires to be aided by education. Let us then attempt briefly to point out in what *directions* education may be made available in enlarging and enriching *the whole* sphere of our ideas. There are two main directions observable in the development of our ideas, termed, in popular language, the *understanding* and the *imagination*. To explain what is meant by this twofold tendency,

Observe, first, that to understand a thing means to be able to assign it its proper place and connection in some system of ideas. We may gaze on an individual object and admire it; but until we can determine *what it is*,—that is to say, until we know its position in nature, to what genus or order it belongs, and to what other things it is related,—we do not *understand* it. So soon as we can combine it in one mental representation with other things of like kind, viewing it as an individual contained under a general term, then, and only then, the understanding is satisfied. This process of understanding proceeds systematically from the *less* to the *more* general. The mind begins by combining a few simple individuals together which have

some common points of similarity (it may be different kinds, to animals or plants), and having observed their connection in nature, it soon combines them under a common representation and stamps them with a *name.* Thus language itself is the product of the understanding, involving a natural classification of our ideas, corresponding strictly with the words we employ to designate them. As the mind grows more mature, and its experiences enlarge, it enters into wider and more general combinations. A dog would at first be connected only with other dogs, and placed mentally in a group of experiences which extend only to the different *kinds* of dogs which might be brought under our observation. Soon, however, the properties of the dog would be compared with those of other animals, and a wider connection established, such as we indicate by the term quadruped. The properties of the quadruped, again, would be further compared with those of the animal kingdom generally; these, again, with other kingdoms of nature, until you arrive, at length, at the highest possible generalization. Thus the main work of the intellectual faculties is to find out natural connections between phenomena, to establish classifications, to go on ever widening the range of vision, including objects the most distant, apparently, from each other, and at first the most unlike, under some general representation, and reducing phenomena of the greatest variety under some general law of nature. This whole form of mental activity, we designate by the word *understanding.*

Now, it will be readily seen that education is of the first importance in assisting the special work of the understanding,—that is, enabling us to comprehend the various classifications on which our knowledge of things almost entirely depends. Take any subject which lies nearest at hand for an illustration. We learn very early the use of language by a natural instinct of imitation; but we do not learn to comprehend the nature and functions of words by instinct or imitation. This is a matter which has to be taught; and it is only by an intelligent instruction in grammar that the proper classification of words can be grasped, the uses of them clearly understood, and the mind trained to that early

habit of clear thinking which can only result from the early habit of clear expression.

Or take as an illustration the subject of natural history generally. The world of vegetation lies about us on every side. We see its beauty and variety, we admire its adaptation to our use and enjoyment, but how little do we comprehend of it simply by the light of instinct! The human understanding has long been employed in tracing connections, in classifying functions, in dividing and parcelling out the whole sphere of vegetable life into genera and species. The value of education here is to bring together the aggregate results of past labour, and lay them clearly before the mind of the pupil. In this way the understanding arrives *by a short road* at classifications which the lifetime of no individual would suffice to work out.

The lesson to be learned by the educator from the whole of this analysis is, that pouring in isolated facts upon the mind of the scholar can have very little effect in stimulating or improving the understanding. And yet what a vast deal of teaching consists simply of this process! How often, for example, is it the case that the teaching of geography is confined to the simple work of storing the memory with a list of facts, or a catalogue of names, and the localizing of these facts and these names on the map. It must be evident that the understanding has very little to do with this whole process. There is no power of generalization called forth, no combination of the less under the more general, no classification which leads the mind of the scholar to *comprehend* the world in which he lives. And yet, surely, there is ample room for this in giving a description of our globe and all which goes on upon its surface. Mountains, rivers, lakes, oceans, continents—all result from great powers of nature, which are operating on a small scale around us every moment. Man, his occupation, his mode of life, his special industries, his intelligence—all depend to a large extent upon the environment in the midst of which he is placed, and by which his whole mode of existence is more or less determined. Every region, every climate, every geological feature, has its special results upon human life. In the whole range of geographical teaching there is ample

room for *classification* and *generalization*, ample room for transferring its facts from being a mere burden upon the memory to the region of the *understanding*, where they acquire meaning and force by virtue of their connection with the whole system of things as seen upon the surface of our globe. So far for understanding.

We will turn next to the other function of mind in connection with its ideas, and that is the region of imagination. In maintaining, as we have just now been doing, that the understanding, strictly so termed, can only be cultivated and developed by means of a constant habit of generalization, in which the connections of things are shown and established, we do not intend to convey the notion that the whole of our education within the region of ideas must be confined *simply* to culture of the understanding. There is another very important mental process to be taken into account, that which is directed not to the combination of our natural ideas, but to their *distinction* and *individualization*. When an object is presented to us, we may occupy ourselves upon it in *two ways*. Either we may regard it in connection with the class or genus to which it belongs, or we may regard it in detail, separating all the individual features and observing the characteristics and analogies of each. Thus, in contemplating a new flower which has never been seen before, one man will most naturally look at those peculiarities which determine its botanical character; while another man will neglect these peculiarities altogether, and look merely at the outward detail, forming to himself a perfect representation of its size, shape, colour, leaf, stem, flower, etc., quite independently of any design of classification, and be able afterwards to reproduce all these distinct characteristics as the results of his observation. While the one man follows the law of his *understanding*, the other obeys the impulse of his *imagination*. And let us not suppose that this latter process is of any *inferior* value in the whole economy of our mental life. Understanding alone may lead to a fuller intellectual grasp of truth; but human life does not consist alone in this. Nature was made not *merely* to be *comprehended*, but also to be *admired*. Why has she made everything beautiful in its time? Why

has she decked the earth with every variety of form and colour? Why has she appealed in a thousand ways to every human sense and every human sentiment? Evidently the varieties and beauties of nature are adapted designedly to awaken feelings, sympathies, emotions, in the human soul, which tend as *directly* to its culture and its happiness as does the direct pursuit of knowledge. Our life, like nature herself, was designed by the Creator not merely to exhibit order and connection, but to blossom forth into all that infinite variety of sentiment, that richness and fulness of idea, on which fully the half of our culture really depends. The force of education, therefore, should be directed not merely to the strengthening of the understanding, but also to the development of the imagination. For this purpose, every means should be adopted for bringing the mind early to the appreciation of the sublime and the beautiful, both in nature, art, and human feeling. The imagination should be enriched by descriptive teaching, by artistic representations, and by bringing it into contact with the highest forms of style, both in prose and poetry. All attempts to cultivate our ideas must aim either at enlarging our comprehension of them, or enabling us to appreciate their richness and variety. These are the two points which the teacher has ever to keep in view. To pour isolated facts into the mind, or crowd the memory with terms and phrases, has no educating element in it; it aids neither the understanding nor the imagination, but leaves the one unsatisfied and the other unmoved. But where both these tendencies are carefully cultivated, good results must assuredly follow. Some minds will doubtless gravitate (in accordance with their natural disposition) to the side of comprehension, and, leaving the paths of imagination, will form habits of comparing and generalizing, of seeing the connections of things and reasoning from one observation to another. They will thus go to swell the number of men distinguished for science, men learned and apt in professional life, men of sagacity as merchants or statesmen, men who gain an insight into the laws of nature, of society, of commerce, of any practical branch of human industry or human investigation. Other minds, on the contrary, will gravitate to the

culture of the imagination; and amongst those will be found poets, artists, litterateurs, men devoted in some way to the culture or production of what is beautiful, men of sensibility, who have an eye for all that is finest in natural scenery, in architecture, in antiquity, in everything which either nature or art can represent and portray.

Thus the great twofold law of intelligence goes to complete itself, and while one-half of the minds which a human education sends forth tend to combination, and the other half to separation and detail, the steady march of human progress goes forward equally impelled by the influences exerted both by the one and the other.

III. LOGICAL PROCESSES.

We have now gone through TWO out of the four ascending phases of our intellectual life. We have seen the value, from an educational point of view, of the culture of the perceptions and the development of our ideas. Now it is exactly *here* that we must draw the line between the lower and the higher education of our schools. Primary, or perhaps we might better term it, preliminary education, confines itself chiefly, if not exclusively, to these two lower forms of intellectual manifestation; the higher education goes on to cultivate the two other more advanced phases of the intellectual faculty, those which we have designated respectively by the name of the logical processes and the higher reason.

We come next, therefore, to consider the methods of education as they relate to *logical processes*. And let me here first of all guard against the misunderstanding that there is any *fundamental* difference between the lower and higher forms of our intellectual life. The laws of intelligence are the same throughout, and the processes are the same. There is an instinctive, undeveloped logic pervading all our perceptions, and the same, in a more advanced form, governing the formation of our ideas. When we come to what have been termed *specially* the logical processes, we have simply to do with a more *explicit* use of the very same intellectual *processes* which we have already seen to be in operation from the beginning.

Now the logical processes, as you are well aware, are ordinarily divided into three parts—namely, simple apprehension, judgment, and reasoning. Under the first part, or simple apprehension, we learn the proper nature and use of terms, we learn to fix their exact extension and comprehension, to form correct definitions and divisions, to give a precise and unequivocal meaning to all the words we employ. Under the second division of logic, we learn the nature and use of propositions, what they consist of, how the subject, predicate, and copula are related to each other, how they can be transposed and converted, when they are to be regarded as contrary or contradictory to each other. Under the third division, or that of reasoning, we learn the use of the syllogism, and in learning this, become conversant with all the different forms in which a correct logical argument may be stated. In studying logic, both deductive and inductive, we do not learn to reason (for that is taught us by the intuitive use of the intellectual faculties), but we learn *what reasoning is*, how it can be most clearly and explicitly stated, and where we are most likely to detect *fallacies*. We do not require, in our daily intercourse with mankind, to use the forms and processes of logic, technically speaking, but we are daily engaged more or less with practical argumentation in the whole business of life. Our higher education, therefore, should be so conducted as to make us sound practical reasoners; and not only this, but to enable us to state our arguments in the most perspicuous and telling form. There are two great branches of mental culture which, it seems to me, are *especially* adapted to develope logical power, and these are—(1) The study of languages; and (2) The pursuit of science, including that of mathematics.

Now, with regard to the *study of language*, let me first of all remark that all language is really based upon the instinctive laws of logic. Every word we use is a *term*, which we ought to know how to employ correctly and within the proper limits of its real meaning. Every sentence we utter is a proposition, which involves the right use of the subject, predicate, and copula. Every discourse we make is more or less a process of reasoning, which should keep within the

real laws of the syllogism, and avoid the ambiguities and fallacies which so often lurk within our phrases and statements. The study of language is, therefore, the study of what is really a species of practical logic; and in no other way, perhaps, can the mind be so strictly and wholesomely exercised in the right use of reason. To get this exercise, however, to bear upon the mind with all its force, it is usually considered necessary to study language through some other medium than our own. We are too familiar, it is considered, with the forms and usages of our own tongue to allow it to be a good instrument of logical education. The mind employs it instinctively, understands it instinctively, occupies itself only with the *ideas* it intends to convey, and by the mere force of habit overlooks the whole grammatical machinery by which it conveys them. It is by means of our own language that we learn to think, so that the thought and the symbol have so closely coalesced in the mind, so indissolubly blended as residua, that we have great difficulty in keeping the *form* distinct from the *matter*. When, however, we take up another language,—and particularly an *ancient* language, which lies farther apart from our own usages, and embodies quite another world of idea different from our own,—then a great intellectual problem naturally lies before us—the problem, namely, of finding an entrance into this new world of thought, and discovering the mode in which it has embodied itself in an organ of expression so widely different from our own. Let any one who has mastered the Latin language sit down and try to make out the mental processes he has gone through in the course of learning it. He has had to learn the exact use of numberless terms, *many*, nay, *most* of which have no exact equivalent in our own tongue. He has had to hedge these terms around *mentally* by all kinds of cautions, restrictions, and definitions, in order that their *exact* force and meaning may be preserved without diminution or exaggeration; he has had to learn the various ways in which propositions are stated. For this purpose he must study every sentence closely, must find the subject and all that belongs to it, must search, perhaps, throughout a long network of phrases to find the predicate, must parcel out, in due form, all the subordinate

parts of the sentence, and then, after a long effort, only succeeds in getting an indistinct idea of the meaning of the whole, which meaning would have burst instinctively upon the mind of an ancient Roman before the sentence was well ended. Thus the modern scholar has to go painfully onward step by step, getting fresh insight, as he advances, into the force of words, the meaning of phrases, the structure of sentences, the development of ideas; and only after years of labour does he feel that the Roman mind, which now lies buried in this great organ of thought and expression which it has left behind, can be called forth from its sepulchre and made to appear again in a living and breathing form. But only consider what powers of mind must be applied before we can conjure up this spirit from the tomb, and what an exercise of all the logical powers it must have involved before the dead letter can become once more instinct with life, and the stereotyped forms of language can be made to speak to us once more the living tones of a world long passed away!

We have placed this side of the question purposely in a strong point of view, and were we to add the *special* advantages accruing from the study of the *Greek* language and literature, the case would become tenfold stronger. But there is another side of the question which must be taken into account, and which will considerably modify our views as to the desirableness of making Latin and Greek the basis of linguistic and logical culture *in all ordinary cases.*

First, then, let it be noted that, to get the benefit of Latin and Greek as instruments of culture, there is need of long, patient, continued, and unwearied study, extending through several of the best years of a man's life. A smattering of Latin and Greek, I hold, is of very little service in aiding our mental development. It partakes of the defects of all half studies, leading the mind to skim over the surface of things, and giving a show, and perhaps a flattering belief, of superior depth of culture, when, really speaking, it represents very little culture at all.

Secondly, let it be noted that, as Latin and Greek have been traditionally recognised as the essential instruments of education, and long employed as such, the value of modern

languages as a basis of mental training has never yet had a fair chance of evincing itself. It is only of late years, for example, that *English* grammar has begun to be seriously employed as a means of logical training; and yet the value of it is already recognised in a large majority of our schools, whether classical or otherwise. Then with regard to French, a language of the most refined and highly-developed order, it has always held quite a subordinate place in English education. French masters and governesses, mostly of a very inferior description in an educational point of view, are employed to teach English scholars to read an ordinary French book and join in an ordinary French conversation; but as to the employment of all the refinements of French grammar and literature to train the mind (in the same way as Latin and Greek have been employed for that purpose), this is an idea almost, if not entirely, unknown in our country. Within the last twenty years the study of German has also come into vogue in most of our higher schools, but here, again, only in the same way as French was taught before it. And yet, what an instrument of culture does the German language and the German literature present, if only rightly used and properly applied! In fulness of its vocabulary, in its power of composition, in the complicated structure of its sentences, rivalling in synthetic force the grammatical forms of Latin and Greek, in the richness of its literature and the variety of its style, one can hardly imagine a more potent engine of mental education, if only employed with the same energy, the same mastery of details, the same minute study and analysis of expressions, as are daily expended upon the classical languages.

Thirdly, let it be noted that one-half of the time and labour devoted to an imperfect knowledge of Latin or Greek would amply suffice to secure a thorough knowledge of French or German, and, consequently, afford a more superior linguistic training than such an *imperfect* knowledge of the classical languages could possibly convey.

Fourthly, let us also note the enormous collateral advantages which a thorough knowledge either of French or German brings in its train. It opens the door to a brilliant modern literature, ever evolving new forms and new

productions of literary activity; it puts a new instrument into our hands for social intercourse and profitable travel; it gives us a new power in commerce, in art, in science, in politics, and the study of society universally. Thus it makes us, so far, citizens of a larger world, and intelligent members of a larger community.

Fifthly, the conclusion is inevitably forced upon us, from all these considerations, that while to the professional scholar, whose business is with human learning, and whose whole sphere of mental action demands the deepest and the fullest culture, Latin and Greek are a necessity indispensable to his whole career of thought and investigation,—on the contrary, to the ordinary scholar, who cannot afford to give long years to the deepest culture, a far more valuable education can be derived from subjects lying around us, and those living languages which open up, in addition to a sound linguistic training, all the inestimable advantages I have above enumerated. The time is inevitably approaching when Latin and Greek will be the heritage only of the professional scholar, while the linguistic culture of the educated masses will be based upon the close and accurate study of one or more of the spoken languages of the civilised world.

We pass on now to the other great branch of study which we referred to as giving another educational apparatus for developing the logical powers of the human mind—I mean the study of *science*. As language is the great instrument for training our minds to deduction, so science is the instrument for training them to the use of all the *inductive* processes which are so important in the pursuit of knowledge. As in deduction we reason down from general laws and principles to particular and special conclusions, so in induction we proceed from particular and individual facts up to general laws and principles. Science is the great school in which this most fruitful of all the processes of logic has been taught and its value demonstrated. The ancient philosophers, down to the time of Bacon, knew comparatively little of it. Their habit of mind was different; they loved to follow the high deductive road; they attempted to reason out their conclusions from general principles and

abstract ideas; they sought to explain the universe in accordance with some theory, the foundations of which were laid in their own mental conceptions. In modern times, thanks to the schooling of physical science, we have learned to proceed by a humbler but a surer road. There is not a branch of science unfolded by the spirit of modern research which does not teach us to *observe*, to note carefully the most apparently insignificant facts, to register those facts in some definite order, to suspend our judgments till all the possible facts attainable have been taken into account, and then slowly to eliminate our conclusions according as observation and experiment have shown us the way.

The habit of mind thus formed is educationally of the highest value; for it is not in the pursuit of physical science only that a careful inductive spirit of inquiry is needful, but it tells equally upon the business of human life. The practical judgments we are required to form daily in the affairs of human life, are more commonly than not of an inductive character. An ill-trained mind is usually hasty in its judgments; it collects a few of the most palpable facts which tell upon the case which may be under consideration, and hurries at once to the result. A well-trained mind knows that to decide from a partial and imperfect statement of facts may be delusive, and waits till the colligation of them is completed before it attempts to seize the final conclusion. The careful inductive spirit of science, when once acquired, applies to every branch of human life, and forms one great element in the results of a sound education of the logical faculties.

There is another important result of scientific teaching, and that is the tacit conviction it has planted in human thought of the universal reign of law. This is really the governing idea of the scientific mind, which, though it may be verbally admitted by many wholly ignorant of science, yet is seldom realized in its practical force, except as the result of scientific training. When once realized, however, it exerts its influence more or less over all our beliefs, modifies even our fundamental ideas of morals and theology, and becomes a real power in the progressive development of human society. Thus the study of science first of all

enriches the mind by storing it with a large accumulation of facts—facts well assorted and arranged, trains it next to the correct use of the logical powers, especially in the inductive form of reasoning, and ends with imbuing it with those great *universal conceptions* which guide our habits of thought and cast an influence over the whole aspect of human truth. Compare the attitude of the human mind in relation to the universe at large, when the globe we inhabit was looked upon as the centre and focus of creation to which everything else was subservient, with the attitude it must needs assume now that science has unfolded the magnitude of nature's realms, and shown the world we live on to be but a speck and an atom amongst the vaster works of the great Creator, and we can hardly fail to realize the change which has been thus wrought in all the higher aspects of human truth. As it is by the teaching of science that these vaster realms of being have been unfolded, so it is by its educating power over the human mind that we rise to contemplate all human truth under the new relations thus established.

Lastly, amongst the instruments for training the logical faculties, we should not forget to mention the study of pure mathematics, especially geometry. As an example of deductive reasoning—clear, consecutive, severely rigid, and infallibly correct—there is, perhaps, nothing comparable with the process of geometric teaching based on the elements of Euclid. Though the exercise of the logical powers in this particular form is necessarily limited from the narrowness of the sphere in which the ideas and definitions lie, yet the perfection attained in the whole process of reasoning can hardly fail to exert a most healthy influence on the mind of the scholar. It teaches him what accuracy means; and if he cannot attain to the same degree of it in the ordinary affairs of life, yet he must always retain a vivid notion of what *positive demonstration* involves, and estimate the more perfectly how nearly it may or may not be approached in other branches of inquiry.

I can only, in the course of a single lecture, just touch upon these points, and indicate for your further reflection the line of thought I wish to follow. The effects of language and science upon the logical powers are in fact almost

infinitely varied; but it would require a volume to draw them out *in extenso*, and press them upon your attention.

IV. REASON IN THE HIGHER SENSE.

We must proceed now, therefore, to the fourth and highest phase of intellectual life—that which we have termed *reason* in the higher sense. What, then, do we mean by reason, thus considered? In what way does it differ from the forms and phases of intelligence already explained? The best way to investigate this point is to consider what would remain *defective* in the whole structure of the human mind were it to possess all the powers above enumerated, and nothing more. There are many inmates of our lunatic asylums who do, as a matter of fact, possess them all, and sometimes even to a very high degree. They have clear perceptions and perfectly-formed ideas; they have memory, the faculty of speech, often to a marvellous extent; they have, beside this, a brilliant imagination, and reason logically with the greatest acuteness upon any given data. What is it, then, that is wanting? Just this, They have lost *their reason*, and therefore can hold no proper place in the ordinary life and intercourse of humanity. But what do we mean when we say that they have lost their reason? They can talk and argue, and employ all sorts of ideas in a perfectly regular and normal way. The point, I reply, in which they fail, is the power of co-ordinating all their intellectual processes so as to produce in the aggregate a rational result. Thus they often mistake sensations for ideas, and *vice versâ*; they form notions, and then regard them as objective facts; they confuse the product of one faculty with another, and thus disturb the fundamental relations of knowledge.

The ordinary use of the word reason coincides pretty closely with this notion of it. Thus we say that an animal has *instinct*, but not *reason*. It can feel, perceive, remember, and carry on many other intellectual processes; but it has no conscious and voluntary power of putting together the results of all these various mental acts, and calculating from them remote conclusions. We speak, again, in common life, of a person acting according to reason, being *reasonable* in his ideas, being able to show a reason for what he does.

There is one fundamental idea which runs through all expressions of this nature—that is, the idea of acting consciously upon a plan which has been duly considered and voluntarily adapted to the circumstances of the case. And this conception of the province of reason again shows it to be the co-ordinating power in the whole of our intellectual processes, as that which gives unity and *solidarity* to them, aiding us at once in the pursuit of truth, and in adapting our lives to the whole environment in which we are placed. It thus realizes the highest idea of life, which is the perfect adaptation of our being to the world in which we live.

The great thing, then, in which the exercise of reason differs from all the other intellectual processes, is its capacity of dealing with a multiplicity of objects and ideas all at once. The primeval savage adapts himself to his environment, shelters himself from weather, hunts wild animals, clothes himself in their skins, and leads a life in which we see the force of instinct (which is spontaneous reason) just struggling out into the higher form of *conscious* reason. The age in which pasture and agriculture begin to appear, indicates a more advanced form of reason. To prepare the ground, to sow the seed, to watch the young plant and gather the harvest, are processes which require foresight and calculation. Here reason draws every mental power as yet developed into its service; it governs the motives, the thoughts, the actions of the man, and prompts him to provide for his own sustenance and happiness upon a more elaborate scale.

As society increases, new problems of life arise—those which seek to adjust the relations of property and govern the actions of men towards each other. Social life thus takes its start, and reason gives rise to the necessary forms of law and government. Then, lastly, we come to the age of science, where we see the human reason investigating nature, interpreting its laws, and making *all* subservient to the wants of mankind. Practical and applied science is simply a mighty adjustment between the powers of nature and the wants of man; it is reason co-ordinating all our intellectual powers to the manifold wants of civilised life. In the same manner does reason enable us to adjust the

relations of the human soul to the universe at large, to the higher life of morality and religion. Thus in the exercise of reason we hold many threads in our hand, bring them all to bear upon one centre, and educe one general result; and the remoteness of the means employed towards securing this end is the measure of the power of reason, which grasps and applies them. From the explanation now given, it will be at once understood why reason is justly called the truth organ of the human soul. What *is* truth but a just appreciation of the relations of things in the universe to which we belong? and what is the power which enables us to grasp these relations and adapt them to our use but *intellect* raised to its highest potency, and governing the activity of all the lower faculties of the mind?

Now, as reason in this higher sense of the word is the very efflorescence and the ripest fruit of our whole intellectual life, it would be absurd to indicate any *special methods* for its cultivation. Whatever tends to enlighten and develope the whole mind, whatever preserves it from partial and one-sided notions, whatever brings out the normal activity of the whole of the faculties and trains them in a perfectly harmonious co-operation with one another, must exactly so far promote the exercise of reason properly so called. The great point, therefore, is to form and follow a scheme of education which brings *all the faculties* into play without laying undue weight upon any one element in our intellectual nature, to the neglect of all the rest. It must be acknowledged that this is a matter which has been too much neglected in connection with the higher education of all countries. A youth enters a monastic seminary in Italy. His whole mind is from that moment bent in one direction. He is taught to reverence simply the learning of past ages. His mind is thrown back entirely upon *authority* as the only safe guide to knowledge. He is taught to distrust all private judgments, and to repress every tendency to think out any human truth for himself. The ultimate result can hardly be any other than to cripple the reason in its growth, by excluding all intellectual light except from one particular quarter, all intellectual *activity* except in one direction.

Another pupil enters an English high school, where the training is exclusively classical—an excellent training, no doubt, as far as it goes, but then it does not go far enough. All the mighty influences which flow from the study of science are wanting, and the scholar goes out into the world with linguistic power and refined taste, but with hardly any points of contact with the great laws of nature, and without those habits of thought which an intimate knowledge of those laws can alone superinduce.[1]

Another student devotes himself *exclusively* to mathematics, and superinduces mental habits equally exclusive in another direction. The remark has often been made, and not without good reason, that a mind accustomed exclusively to demonstrative evidence, is too apt to fail when called upon to deal with the conflicting probabilities of daily life. In brief, whatever tends to give the mind a one-sided bent, is sure, in the long run, to obscure some portion of the light of reason, and render the development of the whole man proportionally imperfect; and that such failure is likely to be produced by a one-sided and excessive mathematical training, can, I think, hardly be doubted. So far, therefore, as psychology can throw any light on the subject, it speaks wholly in favour of the system which proposes to have every branch of human learning duly represented in the scheme of our University studies, and thus to give at least the opportunity to every student of gaining all the mental discipline which arises from a due combination of the whole. Should it then be necessary for each individual to take up any one branch of study as his own especial department, still the spirit which pervades the whole institution will be the needful guarantee against that exclusiveness which warps the judgment and cripples the reason.

We have now gone through the four gradations or phases of intellectual life which we proposed in the outset to consider. Let us, in fine, briefly sum up the results at which

[1] It is but just to say that this is a description of the English public school as it was, rather than as it is. Within the last ten years a large scientific element has been added.

we have arrived. The root of the intellect, its primary germ and starting-point, lies hidden in those pre-conscious conditions which precede our whole mental history. Here the very same laws are secretly at work which afterwards come to light in our conscious existence. When the light of consciousness first dawns, what do we find? We find a bodily frame perfectly formed, we find a number of outlets and inlets to the soul,—I mean the five senses already brought into full play,—and a mutual action and reaction going on between the world without and the world within, all governed and regulated by those pre-conscious laws of our nature above referred to. This, then, is the first school at which we begin to learn; and here, in their lowest phase, all the elements of mind are already at work, and the whole complex of its activity is put forth. In principle, the laws of intelligence are already in full operation; for, even in our primary perceptions, we separate and distinguish on the one hand, we combine and group phenomena on the other. Evidently so, for to perceive a thing means no other than to separate it from the whole mass of sensations which are pouring in upon us, and to recognise it when again presented. We are therefore now, even in this early stage, beginning to drink in through the senses those materials from without which give substance, life, reality, and freshness to our subsequent ideas. Nature herself supplies perceptive teaching to each individual within the range of his own direct experience; but this teaching of nature has to be supplemented by *art*, so as to render the fulness and variety of our perceptive life far greater than it could otherwise be. The little world of our own natural experience may thus be expanded indefinitely by those wise appliances of education usually termed perceptive teaching.

Out of the material of our perceptions, then, we go on to form *ideas*. The mind, by its own free activity, seizes upon the most prominent features in our perceptions, and combines them; while the power of language comes to our aid, and enables us to fix the ideas so formed by an abiding symbol. Thus similar experiences, on the one hand, are united in groups, while the mind ranges, on the other hand, over an infinity of qualities or attributes, thus giving richness

and variety to our thoughts, and enabling us to re-combine them at will into a thousand artistic forms. Here, then, we have the same twofold law of mind in operation, giving rise to the two classes of mental phenomena which we term understanding or conception on the one hand, and imagination on the other. The due consideration of this law gives us another clue to the formation of sound methods of instruction. Those methods which neither stimulate the understanding nor enrich the imagination must be *practically* worthless. The pouring into the mind of isolated ideas or catalogues of names can result in nothing but an obstruction to the development of our mental powers, while methodical teaching, in which everything becomes part of a great system of ideas, and takes its place in a complete map of human knowledge, aids the memory, builds up the understanding, and feeds the imagination.

Here, then, as we saw, the lower range of educational methods and appliances may be said to end, and the higher range to begin. The twofold law of the intellect, which has been hitherto working implicitly throughout the natural development of the understanding and imagination, now enters upon a more *explicit* form of development in the direct cultivation and use of logical processes. The mind learns *now* to define, to judge, to reason, to do so consciously and explicitly. Accordingly, a higher system of educational appliances becomes necessary to train the logical faculties to their full development, amongst which the study of the classical or modern languages, and the pursuit of science, are amongst the most important, and point most directly to the end we have in view.

Then, last of all, comes the mature fruit of our whole intellectual development—I mean the reason, properly so called,—the power of combining and co-ordinating all the elements of human knowledge, and adapting our life to the vast environment which philosophy, art, science, and religion open out before us. To cultivate the reason in this higher sense of the term, are demanded the studies of a *University*, —in the literal acceptation of that word, a seat of learning in which every branch of human knowledge is represented, and an education offered in which all the influences of all

those various branches are duly blended, so as to educe not a one-sided, but a full and harmonious result. Into this harmonious training of the faculties will enter things human and things divine,—all the light which can flow from reason on the one side, from revelation on the other,—so that the pupil may be trained not only to enter into all the relations of human life, but into all the relations he may here and hereafter hold with the entire universe of being, with nature, with created mind, and with God the Creator of all.

We have now completed our inventory of the intellectual powers; but these form only one out of the three forms of mental activity into which psychology has divided all the phenomena of the human mind. There yet remain to be considered the *will* and the *emotions*, neither of which can be neglected by the true educator, though they do not take the same place in his scheme of action as does the development of the intellect, which we have been hitherto considering. We must reserve the fuller consideration of the means to be employed in the education of the will and the emotions to another opportunity, and content ourselves at present with a few remarks simply to prepare the way.

First, then, it can hardly be denied by any one who takes a proper view of human character, that the training of the *will* is a matter of equal importance with that of the intellect. It may not appear to enter so directly into the scheme of education, but it certainly should never be wholly absent from view. As a matter of fact, I imagine that it occupies the anxious thoughts of every one to whom the training of youth is committed, fully as much as their mere intellectual development. The next observation we have to make is, that the power of the will grows up from a primitive and spontaneous form of activity, much in the same way as the intellect grows up from sensation and perception to the exercise of reason. Just as sensations lie at the basis of our intellectual life, and form the primary material on which the mind begins to work in the direction of *knowledge*, so do the instinctive and reflex actions so largely developed in our very infancy lie at the basis of our volitional life,

and form the primary facts out of which the mind first begins to work in the direction of voluntary activity. The mode, too, in which this volitional development takes place is strictly analogous with the growth of the perceptions. Every act we perform leaves its residua behind, just the same as every perception we experience; and the tendency to recurrence, in which the very essence of all residua consists, is the principle according to which our first spontaneous actions grow up into *habits* of action, quite as much as it is the principle by which our general perceptions are originated.

A third observation we have to make is, that volition can only develope parallel with the development of intelligence, inasmuch as reason must enter largely into the whole process by which we come to exercise a power over our own actions and desires. Will, in the special acceptation of that term, is not simply the power of spontaneous action; it is really a very complex state, composed of many different elements,—a state in which the spontaneous activity, originally implanted in our nervous organization, is directed, by the co-operation of the other faculties, to a specific end. The very first ingredient, therefore, which enters into a truly volitional act, is intelligence, for without such intelligence there can be no clear apprehension of any end or purpose towards which we are acting. Added to this, we must have the power of balancing motives, of deciding between them, and then entering upon a course of action in accordance with the decision. The only element peculiar to all this is the *active or motor power*, developed through the nervous organization. The volitional use of this power is due to a large combination of other elements, to regulate which the influence of *education* may be most effectively applied. How it must be applied we shall see more particularly hereafter.

The third great division of mental phenomena with which we started is the sphere of the *emotions*. Emotion, like volition, is a highly complex phenomenon. All the different varieties of emotional sensibility have their respective objects, which can only be grasped by the intellect, and all of them engage the power of the will to strive after their

attainment. Some of the emotions (those, namely, of the higher and more ennobling class) require to be aided and developed by culture and education. Of this kind are sympathy and benevolence, of this kind are the sentiments of the sublime and beautiful, of this kind are the moral and religious feelings. All these emotions, though they have their root in human nature, will ordinarily languish and expire under pressure and neglect, but will add infinite strength and ornament to human character when duly unfolded.

Others of the emotions, on the contrary, are apt under unfavourable circumstances to gain the mastery over the better part of human nature, and require to be *guided* and *controlled* by education. Anger, envy, jealousy, ambition, avarice, and a host of other similiar impulses, though they have their use in the economy of the human mind, yet easily become excessive and proportionally *baleful* in their influences and effects. Education has, therefore, as necessary a function to *repress* and to regulate these, as to strengthen and develope the others; and no education can be perfect, or any other indeed than utterly imperfect, which does not aim at these two purposes in relation to the emotions, just as much as it aims at the culture of the intellect and the regulation of the will. These are points, however, which we shall have to take up in our next lecture, and which we need not, therefore, pursue any further on the present occasion.

What, then, is the general result of the analysis, the outlines of which we have presented to you in the present lecture?

Is it that the mind at birth is a *tabula rasa*, wholly without determination of any kind, and that it awaits the power of circumstances to engrave on it all the characters it can ever possess? By no means. The great pre-conscious laws of our being, we maintain, precede all circumstances and determine the form of our mental activity before even the smallest elementary material is furnished by the external world.

Is it, then, that the mind is created already furnished

with a whole apparatus of innate ideas, the development of which determines the whole character of its future knowledge? This theory, I conceive, can be no more *rationally* maintained than its opposite.

The human mind, according to the view presented in the present lecture, is the highest production of nature, the last and most perfect result of organized life. Like all other departments of life, it is subject to certain fundamental laws which regulate its action, and then, by means of these laws, has to adapt itself to the whole environment in which it is placed. Following the analogy of those lower departments of nature, in which we observe the development of species from lower to progressively *higher* forms, so also we see the mind of man, under the teaching of nature and by the power of self-education, entering on a great course of progressive evolution. What is gained in one age is transmitted as a heritage to the next; and education, starting in every age from the vantage-ground thus afforded, goes on to accumulate mind force in each separate sphere of activity, intellectual, volitional, or emotional, thus aiding the general progress of humanity and widening with the circles of the sun the whole horizon of human *knowledge*. And if, by this view of the case, we are carried backwards to an origin which might make the thoughtless blush at the sight of their pedigree, let us not forget that, exactly in proportion to the depth from which we have been raised, is the height to which, under the power of progressive evolution, we may be destined yet *to attain*.

LECTURE III.

IN our last lecture we began by remarking that modern psychology has, by a general agreement, divided the entire phenomena of the human mind into three great classes, namely,—the intellectual powers, the will, and the emotions. As the intellectual powers are those which are most immediately concerned in education, we went at some length into their nature, their varieties, and the approved methods of their cultivation. The two other classes of phenomena, the volitional and the emotional, we reserved for another opportunity; and as that opportunity has now arrived, we shall take them up briefly one after the other, but mostly from a practical and educational point of view.

And first, with regard to the will, let me begin by repeating what I before explained, that the development of the will is strictly analogous to that of the intelligence. The first instinctive actions of childhood contain the root and starting-point of all volition, just as the perceptions of childhood contain the root and starting-point of all intelligence. It will not be necessary for us to trace the growth of volitional power so closely through its different phases as we did the growth of the intellect. For all practical purposes, it will be sufficient if we take the lower and the higher form of volitional activity, and show the principle on which their due cultivation must be grounded.

By the lower form of volitional activity, we mean the power which the mind possesses over the motor mechanism of the human frame. Every one knows that when he moves any part of his body, the will is concerned in that act; but what I want now to point out to you is, that when the

movements are of a complicated or difficult nature, they can only be performed by means of a course of training in which the mind gains a power over the nervous and muscular system, which without such training would be quite impossible. The human frame is, in fact, a perfect automaton in relation to the will. The complicated movements by which all our muscular activity is carried on, are as much removed from our consciousness as though they were the wheels and pulleys of a machine. The mind contemplates an *end* which it desires to accomplish, and the will looking over all the intermediate agency gives the signal for action. Very often, after the will has sent forth its mandate, the motor system falls short of this end, and we fail to accomplish what the will commands. In this case, be it observed, no mere effort of will can bridge over the difficulty. Our only help lies in a more perfect adjustment being established between the will and the motor mechanism. When by such training new facility is acquired, the power thus superinduced is termed the power of *habit*.

Habit is to the general power of voluntary activity very much the same thing as perception is to the general power of intelligence. Just as we learn to perceive instinctively by the accumulation and complete blending of innumerable mental residua, so we learn to perform all the ordinary acts of life by the accumulation of residua, which thus give an unconscious automatic direction to the whole motor system. The child, at first, has no power over the guidance and direction of his limbs in reference to any external desire or purpose which he may form. It is quite easy to watch his tentative efforts, and see him fail in grasping an object which he appears in after life to lay hold of with a perfectly unconscious and instinctive precision. The reason is, that the appropriate motor residua are not yet formed; the tendency for this kind of action to recur when any particular desire is conceived has not yet been created or sufficiently consolidated. Just as we must learn, therefore, to *perceive* the objects which we afterwards know by a direct and irresistible intuition, so we must learn to *do* the most ordinary acts before we perform them, as it were, instinctively and automatically. Thus it is that the power of

habit lies at the basis of almost the whole of our bodily activity.

The formation of habits, however, can be most easily traced in cases where they are learned later in life. In this respect they stand parallel to those perceptions which are ordinarily termed *acquired.* We might take the power of playing on a musical instrument as a good typal example of these specially-formed habits. An unpractised person, though perfectly acquainted with music, and understanding perfectly how every note is made on the instrument, tries to play some musical passage before him, and, of course, entirely fails. The instrument is unmanageable in his hands; he is unable to find the position of the keys while he is looking at the notes; his fingers cannot move over them either with precision or rapidity. And why? Simply because he has never before made any movements adapted to elicit a musical effect; he has, accordingly, stored up no corresponding motor residua, and formed no habit to aid him. He has, accordingly, to fall back upon what power of analogous muscular motion he has already acquired, and by close, voluntary attention to spell out, as it were, every movement of the hand which is necessary to perform each musical phrase. When this has been done once, the first step has been taken, the first motor residua have been formed, and a muscular movement has been effected which is exactly so much easier to reproduce as the tendency to recurrence after one attempt is greater than it was before. The subsequent steps, then, are a mere repetition of the first. Every repetition adds to the quantity of specialized motor power which is being accumulated in this particular direction, and thus a *habit* is formed which becomes so strong that the mere sight of the notes before us will excite the special nervous actions which are necessary to perform or reproduce them on the instrument. The act thus becomes virtually *reflex;* and the mind of the musician can often be occupied about other subjects, and leave it to the consent between the eye and hand to perform the music spontaneously. Where the habits to be acquired are of a very delicate kind, and require peculiar rapidity of muscular motion, it is necessary that they be commenced early in life.

At this period the motor mechanism has not acquired any very strong tendencies in any direction, so that residua may be accumulated without difficulty, and made to tell with especial force upon any particular mode of action which it may be designed to cultivate. After a time conflicting associations come in, antagonistic habits are formed, and equal labour has to be undergone in *overcoming* the one as in acquiring the other.

In this account which we have just given of the formation of habits, the whole theory of physical education is virtually explained. It is now usually considered to be a matter of some moment to train up our youth to the acquisition of muscular power; and the increase of muscular power is known well to depend on regular and repeated exercise. The repetition of any given series of motor actions results in the development of cellular tissue, and increases in that proportion both the *power* and the *tendency* to call forth similar efforts in the future. If we require to cultivate any series of actions which depend upon skill rather than strength, the training of the motor system must take place in the same way, until a complete *consent* is established between the will or effort to perform the actions in question and the muscular apparatus by which they are carried out. In proportion, moreover, as the series of movements require tact, dexterity, rapidity, and accuracy, in that proportion must the training be commenced in early life. Great proficiency in performing on a musical instrument, great ease and steadiness in such exercises as skating, riding, playing games of skill, and so forth, can very rarely be acquired unless the motor apparatus be adjusted to the volitions in early life. The same thing may be said of *deportment*. The tendency, so frequent in children, to awkwardness, or what the French term *gaucherie*, requires to be overcome by regular and systematic exercises of an antagonistic kind. Where habits of graceful movement are learned early, they remain as a heritage for ever afterwards; the mind and the will may henceforth banish all thought and all effort regarding them. Once laid up amongst the residua ready for action, the motor mechanism will reproduce them whenever the association prompts; and thus good manners (as far as the

outward expression is concerned) become a part of our unconscious and spontaneous life.

Now the explanation we have just given of the manner in which the lower sphere of our volition may be trained in regard to physical acts, will apply with almost perfect exactness and parallelism to the training of the will in regard to the higher sphere of human character. Every time we perform a given action, a residuum is left in the mind, which renders the facility for performing it again, and the tendency to do so, relatively greater than it was before. To this fact we have already traced the power of habit and the growth of skill in physical actions; and to this same general law, I have to show you, we may now trace the *further development* of the human will in its power over *every other* kind of human action.

The law, as applied to human action generally, may be thus stated :—

The power and tendency we possess to follow any given course of action is proportional to the frequency with which such action has been repeated, and the consequent strength of the mental habit which is formed in this special direction.

The child in early life has formed as yet no habits with regard to his actions; he does, therefore, at every moment whatever he feels impelled to do by the temporary motives and impulses acting upon him. If he grows up to do this without any check upon him on the part of parental or any other authority, the habit of acting according to his immediate impulses soon becomes strengthened, residua accumulate in this particular direction, and control soon becomes exceedingly difficult. Compare this case with that of a child brought up under stern command. The mental tendency here developed assumes quite a different character. In place of following his own impulses, he is afraid to yield to a single desire; he is so accustomed to repress his own wishes, and act only upon *authority*, that all his volitional tendencies are bent in this direction. He will hesitate to do what his own feelings prompt; he will fly to the performance of what is sternly enjoined. Take another example from the American Indian. In ordinary life he is

the creature of his impulses and passions, and cannot bear the shackles of civilisation. This very Indian, however, can exercise the most unbending will when taken in battle and subjected to torture. He and his forefathers have been taught to look upon endurance, in this respect, as a virtue and a necessity; and in proportion as they have been accustomed to command themselves under suffering, they acquire a power of voluntary restraint which more civilised men are wholly unable to exhibit. Here, accordingly, we see the operation of the law before stated, that the accumulation of power in any direction is proportional to the frequency and constancy with which the actions in question have been repeated.

Let us trace the influence of this law in education. We go back to the indifferent period of childhood, where the active power is lying, as it were, balanced amongst the different motives which will soon bear upon it, and inevitably draw it into some predominant direction. We will suppose now that the educating influences are favourable. When this is the case, then every time that the child is unduly prompted by passion, or selfishness, or indolence, to neglect a duty or commit a fault, a salutary restraint is exercised. The necessity of subduing the appetites, and the superior excellence of actions which are in accordance with rational conviction, is first explained and then firmly enforced. Every conquest which is thus gained over a passion or an appetite, and every instance in which reason or duty is accepted as the guide, strengthen the tendency to follow reason and duty in place of mere inclination. What is done first, under the pressure of authority and a wise compulsion, is soon done from a perception of right, and from the habit of being influenced by it. Thus, as the parental authority is relaxed, we transfer our allegiance to the more general claims of moral law, and acquire the habitude, by the continued observance of this law, to act uniformly in accordance with the precepts which it enjoins.

The mere perception of the excellency of the moral law, and the great desirableness of acting on it, is not enough. Thousands there are who approve one course and follow another. Their reason is enlightened enough to see and

admire the good, the beautiful, and the true; but the proper volitional residua have not been accumulated, or, if accumulated, there are other accumulations which impel them to follow certain appetites and passions, so as to render their life one perpetual struggle between opposing tendencies. Where the mind is the theatre of such struggles, we agree in deciding that the will is *weak*. When such struggles cease, by the conquest of reason and conscience over impulse and passion, we agree in saying that the will is *strong*.

It is by the consolidation of these habits, finally, that the general result is produced which we term *character*. A good or bad character, a weak or strong character, an ordinary or extraordinary character—all these express different states into which we are brought in regard to the mode and motives of our action, by means of the processes just pointed out. Of course, we must take into account the hereditary tendencies which may give a bias in one direction or another; but, allowing for these, the character of each individual is formed by the very same law that shapes our active habits, and puts the regulation of our practical life at the disposal either of inclination or reason, either of passion or of moral law. Thus, from performing the more simple and indifferent actions as the result of a conscious purpose, we gradually rise to the performance of more important ones; we learn to act on a fixed purpose, even when passions and temptations draw us in another direction; we give to life itself one great purpose, which we ever pursue, and thus, finally, form a *character* which may be *eternal*.

The education of the will is really of far greater importance, as shaping the destiny of the individual, than the education of the intellect; and it should never be lost sight of by the practical educator, that it is by amassing and consolidating our *volitional* residua in certain given directions that this end can alone be secured. Theory, and doctrine, and inculcation of laws and propositions, will never of themselves lead to the uniform habit of right action. It is by *doing* we learn to do, by *overcoming* we learn to overcome, by obeying reason and conscience that we learn to obey; and every right act which we cause to spring out of pure principle, whether by authority, precept, or example,

will have a greater direct weight in the formation of character than all the theory in the world.

So far, then, for the education of the *will*. We must now pass onwards to the third and last of the three great divisions of mental phenomena—I mean the *emotions*.

The psychology of the emotions is somewhat difficult and obscure, and it would hardly serve our purpose to enter into the analysis of them in the present lecture. But if the nature and genesis of the emotions is obscure, the manner of their growth and development is abundantly clear, and this will be quite sufficient for the practical point of view from which we have now to regard them.

In looking, then, over the whole range of the emotions from this practical and educational point of view, we find them divisible into two great classes—first, those emotions which require to be governed and repressed; and secondly, those which require rather to be developed and promoted.

1. To those which require to be governed and held in check belong especially the passions, inasmuch as these are *par excellence* the emotions which most frequently master the will and run counter to the dictates of reason. The passions are complex states. They involve, first of all, some natural or artificial feeling which is productive of pleasure or gratification. Then, secondly, some act is performed on our part, which act, thirdly, becomes intimately associated with the pleasure we derive from it. Every time this act is performed, and the gratification experienced, a fresh residuum is deposited, and the tendency to repeat the act (according to the law we have many times explained) becomes stronger. Thus, in process of time, the craving for the pleasure, and the tendency to repeat the act which supplies it, become so strong that they together overcome the suggestions of reason and get a complete mastery over the will. Thus drunkenness as a passion begins with the natural gratification we derive from assuaging our thirst. This gratification is heightened when that which we drink has also the effect of stimulating and exhilarating the mind. The oftener, therefore, this act of exhilaration is repeated, the stronger the tendency becomes to do so; and at last, when the accumulation of residua impelling us to the act of enjoyment becomes

greater than those which lead us to self-control, then intemperance enjoys its triumph, and we are rendered incapable of resisting the passion thus acquired.

It is not necessary for us to go through any long catalogue of the passions to verify this analysis. But if we were to take them all one by one, if we were to examine the phenomena actually presented by avarice, ambition, jealousy, love, hatred, gambling, and the like, we should feel that they all begin in some feeling of gratification, more or less intense, as the case may be, and are built up by the accumulation of mental residua, which become more powerful exactly in proportion as they are multiplied by the frequency with which they are repeated. So strong do these accumulated influences at last become, that they even impel to action when all the freshness and zest of the pleasure which the passion at first afforded has passed away.

The great point in education as regards the *passions* is to prevent their unnatural growth from the very beginning. This will much depend upon giving an abundance of healthy occupation, rational enjoyment, and pure moral impulses. Where these natural and lawful impulses are not supplied, the mind will be sure to fall back upon artificial stimulants of some kind. Hence the severe and mistaken policy of withholding from the young and ardent mind all the natural, simple, and innocent pleasures of life, will almost inevitably lead that mind to build up other gratifications until they issue in the most imperious passions. What those passions are, will depend greatly upon the natural dispositions of the individual and the circumstances which surround him. But no mind can remain a *perfect blank* to all human enjoyment; and where no *proper* enjoyments are afforded, noxious ones will grow up, even as the weeds which encumber a neglected and ill-cultivated soil.

But where strong and unhealthy passions are already formed, they may still be softened down and perhaps eradicated by rational treatment. What that treatment is may be seen by the law of the action and reaction of ideas, viz. this:—

That everything we hold in our memory is gradually weakened by all the other dissimilar ideas which occupy the consciousness.

Every one has experienced how those things which we have even most strongly impressed upon us, fade away from the memory when there is nothing to remind us of them. Supposing some harassing thought haunts us, and occupies the mind to the exclusion of everything else. Were there no provision for freeing the mind from such *spectres* of its own *imagination*, life itself would become a burden too heavy to bear. The mental process, however, by which these harassing thoughts are removed, is at hand. We are surrounded by *circumstances*. Men, things, human life, nature—all present themselves at every turn to our senses. For an idea to be strong enough to take full possession of the mind, it must also be strong enough to overcome all these resisting forces. And for a time, perhaps, it does overcome them; but in overcoming them it loses an equivalent portion of its own strength and vigour, until at length it becomes unequal to the task of keeping the uppermost place, and sinks down beneath the surface of consciousness, allowing the current of other impressions to ripple over it. Thus, however strong an impression may be, it cannot long challenge the mind's whole attention. It is eaten away, if we may so speak, by innumerable *minor* objects of interest, and our ordinary equilibrium is again restored.

Now, exactly the same principle will hold good in relation to the passions. So long as surrounding circumstances tend to *feed* them and keep them *alive*, they will only gain increasing strength. But remove those circumstances, and surround the mind with other impressions, insinuate other desires, provide new impulses of a better description, occupy the feelings and sentiments with new objects of interest, and the most absorbing passions will gradually wear away; and if the process be carried on with sufficient care and continuity, almost a perfect substitution of the one for the other will in the end be effected.

But while there are passions which require to be *repressed*, there are other emotions of an ennobling character which the educator should carefully *cherish* and *unfold*. These are the natural sympathies, the æsthetic emotions, the moral sentiments, and the religious feelings. There is one principle which applies alike to all these classes of mental

phenomena, viz. that they are to be strengthened not by precept, but by *exercise* and *example*. Let me take an instance of what I mean from the perception of musical harmony, a case that is valuable for illustration from the clearness of separation which exists between the perception itself and intellectual theory which explains it. It is notorious enough that a great difference exists between individuals as to their power of appreciating musical sounds; and this difference is expressed in common language by referring it to what is called a good or a bad ear. Now, where a good ear exists, we know well that it does not depend at all upon any theoretical knowledge either of music in general or the laws of harmony in particular; it depends upon an *inherited* or a *trained* musical *susceptibility* which no mere explanatory teaching can ever produce. Exactly so, on the other side, when an imperfect musical ear exists, it can never be improved or rendered more capable of appreciating harmony by any amount of study applied to the theory of music and the laws of thorough bass. All such study applied to the intellectual or *scientific* side of the question would leave the *ear* exactly where it was at first. If we want really to cultivate the ear and supply the defects under which it labours, it must be done by practical training. Correct tones, precise intervals, simple harmonies, must be brought to bear upon it; and thus by examples and by practice the musical power can be gradually increased, and the want of accurate perceptions rectified. And exactly so it is with all the classes of emotions above referred to. *Sympathy* will not be strengthened by mere discourse on what we owe to our fellow-creatures, and the duty incumbent on us to have a fellow-feeling with them in all their joys and sorrows; it is only called out by contact with human life, and by the influence of circumstances, in which selfishness is repressed and the better feelings of our nature brought to bear upon the claims which our fellow-creatures possess upon our *kindness*, *thoughtfulness*, and *regard*.

The æsthetic emotions, again, will not be strengthened by any inculcation of a theory or a doctrine respecting the sublime and beautiful; they will only be really cultivated by actual contact with what is sublime and beautiful in itself.

Childhood and youth should be surrounded, as far as possible, with neatness, good order, and harmony of arrangement; it should be made familiar with forms of beauty either in nature and art, and the sense of the beautiful should be thus early instilled by quiet contact and daily intuition. Much yet remains to be done in the promotion of good taste by removing what is sightless, gaudy, misshapen, and inharmonious out of the way, and surrounding daily life more than we yet do with what is correct and harmonious in colour and design. The use of art as an instrument both of early education and popular improvement is only in its infancy, and is assuredly destined to take a higher place than it has yet done amongst the means and appliances of human progress.

With regard to moral training, the illustration taken from music is again perfectly applicable. There is just the same relative difference between moral feeling and moral theories as there is between the musical ear and the science of harmony, and the same principle holds good in regard to moral training. The mere exposition of moral law, of duty, of the nature of conscience and the basis of virtue, may be a good and useful intellectual exercise, but it does not go far to train the moral feelings or inspire *a love* for virtue and right. This has to be done mainly by the methods of practice and example. If we want to preserve the youthful mind from accumulating evil incentives, we must keep far from it the very aspect and savour of vice, whether in words or in actions; for the soul, as yet free from contamination, will be deteriorated by contact with impurity even in the shape of warning and counsel. If, on the other side, we want to inculcate the practice of right and virtue, then let it be shown by *example*—example in the parent, example in the teacher. The influence of a good and blameless life, in which there is exhibited with quiet firmness and uniform unostentation the love of justice and the abhorrence of evil, will do more in the way of real moral training than volumes of precept and folios of doctrine. The latter may add to our intellectual grasp of the subject, but the former alone will assist in laying up those special residua which impel to moral action, and bend the will and the sentiments in the same direction.

Lastly, if we desire to cultivate the religious feelings, the same principle must once more be our guide. The example and the practice of sincere worship, and heartfelt reverence for the unseen and the eternal, will yield fruits of religious vitality where all mere dogmatic instruction will fall dry and barren on the ground. I have now completed the proposed summary of our mental phenomena, which were divided, as you will recollect, into the three classes indicated by the terms intellect, volition, and emotion. To go through all the minor variations of these mental states would require a volume in place of the brief space which can be allotted to it in the present lectures. I have been anxious simply to indicate the principles which lie at the basis of our mental development, and hint very briefly at the methods of instruction best adapted to promote it.

There are one or two points, however, of some importance still remaining, to which I am desirous of drawing your attention before we come to a final conclusion.

One of these points is what we may term the doctrine of *individuality*.

Although we have endeavoured to trace the mode in which intellectual power and the force of will are developed, yet it must be borne in mind that an individuality is always presupposed, without which no intelligence and no will at all is conceivable, which always lies in the background as the realistic starting-point of all mental phenomena, and which maintains a marked peculiarity in each case throughout all the phases of its development. We may term this starting-point transcendental (as lying beyond the bounds of actual experience), but it is none the less real. The case is somewhat analogous with what we conclude with regard to the varying phenomena of the universe itself. We are placed in the midst of the vast machinery of the solar system. Human reason has succeeded in comprehending that system so perfectly, that we can foretell the revolutions of the heavenly bodies to the fraction of a second of time. But when all this calculation is accomplished, the question still remains, What is it that has set the whole in motion, and whence has the force expended on it been derived? This question is likewise transcendental. It lies beyond the limits of

human experience; but we have a natural belief, confirmed by a universal human conviction, that the universe emanates from a divine creative power, without which no realistic starting-point appears conceivable to the human reason. So it is that we are situated *scientifically* in relation to the motor phenomena of the animal frame and the intellectual phenomena of the human mind. We witness the flight of the insect, the gambols of the young colt, the activity of the schoolboy, and we ask, Where is the *origin*, where the primary impelling power, of all these respective complicated systems of movement? The question, we repeat, is *transcendental*. We may term the power which we seek for, the vital principle, or we may call it the soul, or we may give it any other name we please; but the source of motion and thought lies without the bounds of human experience, and we can only fall back upon a natural belief, confirmed by the convictions and languages of all mankind, that there is something which we call life, or something which we call the *soul*,—a human monad in which we believe, though we can never find it—a source of power, of intelligence in the individual, which no chemistry can account for, and no anatomy ever reveal.

With regard to this human monad, this individuality which every man calls self, we may go one step farther and say that as the charm of nature lies in its infinite variety, so the charm of humanity lies in the unending diversity of character which the human individual presents. Each mind has its own type from the first moment of creation, and that type pervades all its thoughts and actions, preserving a distinctive hue through every phase of circumstance in which it is placed. If this be so, then education ought to have for its aim not to fashion all minds to a given level of thought, action, and sentiment, but rather to develope each individuality, whatever may be its original stamp, to its full bloom, and give it its full play. No doubt there are individualities so strong that they will break through all the bounds of custom, habit, or instruction, and assert themselves in the world. But these are comparatively rare. The mass of mankind are of a weaker individual type; their genius may be overwhelmed and stifled by formality on the one hand,

or may be drawn out by more favourable influences on the other. It is important, therefore, for us to know what kind of circumstances tend to develope the original and characteristic powers of the mind, and what influences should be avoided as tending to crush and obliterate them.

To probe this question to its base would, no doubt, be a matter of great difficulty; but I will, at any rate, bring forward one point which appears to me to bear forcibly on the subject.

Of all the instrumentalities which tend to influence the development of every human mind, there is none of greater weight than *language*. Now every language is a little world of ideas in itself. The language of every people, partly from the influence of race, partly historical circumstances, partly climate, partly isolation from other countries, acquires a certain peculiarity which colours their whole mode of thought and feeling. 'Every language,' says Humboldt, 'regards the universe from its own point of view.' No doubt that view is the reflex of the national mind; but, once formed, it reacts so strongly upon future generations as more or less to mould them into an intellectual pattern of its own. With exception of purely technical terms, there are absolutely no equivalents and synonyms between one language and another. All moral and intellectual ideas possess, amongst every separate people, a hue of their own that is reflected in the words by which they are expressed. Now, the native tongue of every individual is the natural organ by which he learns to think. Its words, phrases, idioms, are the original moulds in which his ideas are cast; and his whole intellectual development is at first guided by the whole spirit of the language in which alone he can express his thoughts or feelings, or hear them expressed by others. Thus, in process of time, language and thought become so blended that the one can be made to express, in the hands of a ready and eloquent speaker, all the varied tones of feeling and minute shades of idea which pass across the mind. Here, then, it is that the mind's *individuality* comes out. We see it in strength of language, in pith and point of expression, in happy terms of phraseology, in the power of moulding words to all the peculiarities of the mental nature of the individual. The

same thing appears in style, where originality is the very life of a national literature. Where style is a mere imitation of former models, however perfect, there is no vitality, no vigour, no flashes of national genius. A real, living, and productive literature, which tells upon the people and moulds its ideas, only exists when some original genius seizes upon the popular language, makes it plastic to his touch, throws the burning thoughts of the age into new and telling forms, and thus makes his own individuality tell upon the real inner life of the masses which surround him.

To do this a man requires a great mastery of his native tongue; he requires that it shall become to him a perfect organ of expression, and be so intimately blended with his thoughts and feelings as to respond to his touch like an instrument to the hand of the consummate musician.

Now the question comes, Can this power of expression, this faculty of *throwing out* all the originality of each mind into words, be fostered by a good method of education on the one hand, or hindered by a bad method on the other. I have a strong conviction that both these questions can be answered in the affirmative. It appears to me quite evident, as I before remarked, that every scholar should become thoroughly well acquainted with his own tongue, that he should enter into the full spirit of it and make it the great organ by which his habits of thought are moulded, before he enters on the study of other modern languages. There is a notion widely spread, particularly amongst the higher classes in our country, that great advantages are to be derived from giving children the habit of speaking two or three languages almost from their infancy. It is argued, plausibly enough, that children can learn a foreign tongue without any trouble, by beginning early and picking it up spontaneously as they pick up their own; that in this way there is secured a great saving of time in after life, and a much greater facility in acquiring both the pronunciation and the idiom. It is little considered by those who argue in this way what a confusion and blurring of thought, as we before showed, is sure to follow from such a method. Instead of possessing one clear, definite idiom in which to

express themselves, instead of having one homogeneous organ as the medium by which they learn to think and speak, the mind is confused by a variety of words and phrases which answer to no sharply-defined and well-impressed ideas. No man can be really pointed, pithy, and original except in his own native tongue; and to whatever extent he divides his power of expression from childhood between that tongue and *others*, into the full spirit of which he can, at best, but imperfectly enter, to that extent, I believe, he destroys his power of originality, and renders his habits of thought loose and desultory. I have had unequivocal testimonies from teachers as to the difficulty they have experienced in dealing with pupils whose earliest life has been subjected to these influences. Nor do I believe that, if we examine the history and literature of bilingual peoples or nations, we shall ever find there the same freshness, vigour, and originality which we find in those whose modes of expression are perfectly homogeneous. The modern, like the ancient, languages may, indeed, be made a fruitful instrument of mental training if rightly used; but their use as an organ of communication and expression should be deferred until the habits of thought are well formed, and the spirit of our native tongue has taken full possession of the mind.

Another question closely related to this is, how far it conduces to the development of national genius to build up all our higher education upon a long and laborious training in the languages and the literature of Greece and Rome. While, on the one side, we cannot doubt but that Greek and Latin present a wonderful instrument of logical culture, it can hardly escape us that the most remarkable productions of literary productivity do not usually proceed from our great seats of learning, but rather from the more obscure walks of life, where the education has been more exclusively *national*. Shakespeare, Burns, Charles Dickens, men who are representative of their respective eras, are types of genius, nurtured, like the Greeks, in *home culture*, not in the culture of ancient or foreign tongues. So in Germany we do not find the representative men of the nation coming out of the national Universities, replete with the lore which those famous

seats of learning cultivate and instil. Goethe, Schiller, Jean Paul, Körner, Uhland, Freilegrath, and many others of the same stamp were scarcely any of them, technically speaking, scholars—that is, men of great acquirements in ancient and classical literature. They were rather the exponents of the *Zeitgeist* and the *Volksgeist*, such as their age and their country had evolved them. It may therefore well be a point worthy of great consideration, whether an exclusively classical education is not adapted rather to *extinguish* than to promote native and original genius, and whether the individuality of every country would not stand a better chance of steady development if a greater national element were to enter into the basis of popular education. English for the English, German for the Germans, French for the French—this might not, after all, be a bad motto in education. Not that we would advocate the abandonment of classical studies, as this would, no doubt, be only running into an opposite extreme. All we contend for is, that the spontaneous genius which springs up amongst every people should not be stifled and overlaid by an excessive deference to classical models, but should have free scope to expand itself in a genial atmosphere of purely national culture.

This is, in fact, only an application of the principle which Frœbel announced, and which he spent most of his life to realize—namely, that the education of a *mind* must be regarded under the analogy of the development of an organism. Just as a tree, for example, grows out of a central point, namely, the seed; just as all the nutriment it receives from without must enter through the root and be assimilated before the organism can expand into all the luxuriance of branch and leaf, flower, blossom, and fruit; so, also, the human mind must be unfolded from a central germ, viz. its own inward individuality, and all the appliances of learning must be assimilated into that individuality before it can bear the blossom and fruit of a full and perfect spiritual development. A vast deal of what we term human learning is, after all, mere useless lumber, which lies like a dead weight on the spirit, and blocks, instead of enhancing, the natural activity of the inner faculties. Food must be

digested and assimilated before it can nourish the body, and undigested food must be got rid of, under pain of its encumbering and impeding the health functions of life. Just so must all outward instruction be so received as to enter into the mind's own substance and texture, and come out again with the stamp of our own individuality upon it. And here we leave our subject for the present, hoping that the hints scattered through the preceding pages may prove useful in drawing attention to a subject so intimately connected with the future wellbeing of every individual, and the future greatness and prosperity of our national life.

POSTSCRIPTUM.

On the Latest Phase of Edward von Hartmann's Philosophy.

SINCE the above chapter on modern German philosophy was written, the name of Edward von Hartmann has obtained a celebrity in his native country which can only be paralleled by those of Kant, Fichte, Schelling, and Hegel. The *Philosophie des Unbewussten* was published first in the year 1869, and fairly took the mind of Germany by storm. Schopenhauer was beginning to grow flat, stale, and unprofitable: he had been too many years in the field; but here at last was a new philosophy—a new *Standpunkt*, a new *Weltauschauung*. And what a *Weltauschauung!* A mysterious principle called '*the unconscious*,' it appeared, had now become sole lord and king of the universe. All the wonders of physical life, all the promptings of instinct, all the hidden fires of soul and genius, all the springs of thought and feeling, all the joys and sorrows of love,—nay, all the sources of human history, and the solemn march of the universe itself—all alike, it was affirmed, spring out of '*the unconscious*.' The absolute *Ich* of Fichte, the *Subject-object* of Schelling, the *Logical Idea* of Hegel, the *Will* of Schopenhauer, and the God of Christianity, were all alike dethroned, and the *Unbewusste* reigned supreme! And who was the discoverer of this new *Weltauschauung?* Was it some hoary-headed philosopher who had shut out the world from his thoughts, and pondered over the mystery of existence until the hidden things became plain, and 'the unconscious' rose up before him in all its majesty! No; nothing of the sort. The author was a young nobleman who had entered the army in

early life, and had been driven into home and solitude by a physical infirmity which prevented the further pursuit of arms. And now, behold! before he has seen thirty summers, he solves the problem of existence, and 'the unconscious' becomes the idol of the day. Whether that idol was actually *worshipped* by any of the enthusiastic students or fair-haired maidens who pondered over it in secret, or whether any enthusiastic disciple imitated the Athenians in raising an altar to the *Unknown God*, I am unable to say; but assuredly it was discoursed of in all the learned coteries and æsthetic saloons of the country, forced its way into the professor's lecture-rooms in every German University, was discussed in every literary journal, and enjoyed a popularity which ensured the issue of seven editions in hardly so many years.

But 'the unconscious' was not to assume its authority unchallenged. A sharp incisive criticism in Fichte's *Zeitschrift* pressed upon the author to explain how he could acquire and certify his knowledge of 'the unconscious;' for if he is unconscious of it, how can he know it? To know a thing is to be conscious of it; and to be conscious of the unconscious seems to be something very much like a contradiction in terms. Herr von Hartmann, however, unlike the philosophers of the last age, had followed the inductive method of research, and illustrated his doctrines by abundant references to physiology and the natural sciences. He was not therefore to be put down by metaphysical *Wortspiel*, but appealed to solid facts—facts in nature, facts in science, facts in history, to maintain his position. This being the case, some of the professors of physiology and natural science naturally took up the challenge, and, with an amount of learning in these departments far superior to what the author himself possessed, reduced his methods of analysis to comparatively small proportions.[1] More particularly was this accomplished by an appeal to the discoveries of Darwin, according to which it became evident that most of the phenomena connected with the reflex actions of the nervous system, with the

[1] See particularly Oscar Schmidt's critique, entitled, *Die Naturwissenschaftlichen Grundlagen der Philosophie des Unbewussten.*

marvels of instinct and the anomalies of human feeling and human genius, which Hartmann had drawn at first hand out of the depths of the unconscious, are in fact only hereditary powers and tendencies perfectly accounted for by the principle of natural selection.

The most remarkable of all these criticisms, however, appeared in 1876 in a separate and anonymous work, entitled, *Das Unbewusste vom Standpunkt der Physiologie und Descendenztheorie*—*i.e.*, 'The Unconscious from the point of view of Physiology and the Theory of Descent.' In this book the conclusions of Hartmann were confronted all along the line with the Darwinian doctrines, and driven out of one stronghold after another until they found a last refuge in the metaphysical region alone. But who could this unknown author be, who, without actually dethroning the reigning idol, drove him from the greater part of his dominions, until he was fain to take refuge in the cloudland of metaphysics, and there only assert his authority? The problem was soon solved; for in 1877 came out another and enlarged edition of the critique, with the author's name attached, from which it appeared that the censor of Edward von Hartmann was no other than Edward von Hartmann himself! The whole rise and progress of this newest phase of German speculation is, in fact, so remarkable that we may well be excused for devoting a special postscriptum to its further elucidation.

Let us first try to get a correct idea of the system in the form in which it was first of all propounded. To do this we must go back to Kant, as forming the real starting-point of all the modern speculation of Germany. Kant's attempt to define the scope and limit of the human reason, ended in the conviction that our knowledge can only extend to the phenomenal world, and that the reality which lies behind phenomena—the *Ding an Sich*—can never be reached by any process of *knowing* which the mind of man is in possession of. Notwithstanding this conclusion, the succeeding philosophy, as though attracted by the very idea of forbidden territory, chiefly strove to solve the very problem which Kant had declared insoluble. Fichte explained the universe from a purely subjective point of view, making the

mind—'the me'—the human personality, the fundamental principle of all things—a principle revealed to us in our individual self-consciousness. Schelling turned the medal with its objective side upwards, and showed all the phenomena both of our inward self and of external nature to be manifestations of 'the absolute,' mind and nature being here united in their primary and identical essence. Hegel fixed his gaze upon the process of *thought itself*, and made this synonymous with the process of the world. Schopenhauer regarded *will* as the type and ground of all being—the *human will* constituting the fundamental essence of the human personality, and the powers of nature being only another form of an absolute will that constitutes the real basis of the universe itself.

These doctrines were all thrown out upon the world during what may be termed the speculative age of Germany, —an age in which the national life, politically considered, was at its lowest ebb, and the intellect of the country loved to nourish itself on abstractions. But they could none of them long survive the *renaissance* of the national vitality. As systems of thought, they had their day, and passed out of sight, except as forming interesting pages in the history of philosophy. It would augur a very false estimate, however, of this whole phase of intellectual activity were we to suppose that the whole *influence* of such systems as those above mentioned pass away with them. They all leave their *mark* in some form or other upon the world of thought, and all prepare the way for some new system in which their net *results* may be again embodied. Down to the time of Kant, the philosophy of Germany was, strictly speaking, THEISTIC. No writer of any consequence attributed the creation and preservation of the universe to any other than *a personal Creator* and a moral Ruler, infinitely wise and good. Kant, it is true, gave up the *speculative arguments* for the being of a God, but held the moral grounds of our faith in this great truth amply sufficient and conclusive. But in the post-Kantian age all this became changed. Fichte's subjective philosophy drew down upon him the charge of *atheism*, which he was never able logically to rebut. Schelling and Hegel made ample use of the *name* of God,

but always in a pantheistic sense. From this time, accordingly, the atheistic conception of the universe became familiar to the speculative mind, and tacitly influenced all the springs of popular belief.

The progress of natural science tended also to the same practical result. In proportion as the reign of law was seen to extend into the most intricate regions of nature, and the causes of the most recondite phenomena were traced, where no secondary causality had before been imagined, the operation of the first cause was mentally driven farther and farther from us, and the hand of God, which before was seen operating all around, receded into the infinite distance. All this naturally paved the way for a philosophy which, avoiding the rugged road of *à priori* speculation, and taking its starting-point from the actual phenomena of the world around and within us, proceeded to show, how all the facts of organic nature, of mind, of human life, of the universe at large, spring out of *one fundamental principle*, endowed with power and intelligence, with wisdom to adapt and force to perform, omnipresent in every atom, and omnipotent in every act; but at the same time *impersonal* and *unconscious*. In brief, we can easily trace in this way the antecedents from which the *Philosophie des Unbewussten* naturally flowed, and the causes which gave it so sudden and almost unprecedented a popularity.

The most direct road into the comprehension of the unconscious, as an all-pervading principle, is by the due consideration of *design in nature*. In design we see the clear foreshadowing of an end aimed at, and the properly-adapted means for arriving at it. Take the case of a bird sitting on its eggs. Why does it do so? Primarily, because it wishes to bring out its offspring into the world; secondarily, because it wishes to conserve the race. But no one imagines that these ends are *consciously* in the mind of the bird; and yet it has manifestly an intelligent purpose in view, and adopts perfectly well-adapted means for securing it. Here, therefore, there is a clear example of the operation of 'the unconscious,'—a principle, *i.e.*, not appearing in consciousness at all, but known only by its effects.

Having thus clearly defined and grasped his principle of

the unconscious, Hartmann begins by showing its operation in our physical organization, in the independent actions of the spinal marrow and ganglia, in the operation of the motor nerves (which unconsciously to ourselves perform the most delicate operations necessary to our life and well-being), in the reflex actions, in the wonders of instinct, in the healing powers of nature, in the unconscious influence of the mind upon the body, and in the whole plastic force by which our organisms are built up.

In all these operations, precisely as in the case of final causes or design in nature before referred to, we see a great, all-pervading, unconscious *power*, guided by an unerring intelligence, and operating by the best possible means—an intelligence which does not stand out of or apart from nature, but is immanent *in nature*, and, though hidden away in the depths of unconsciousness, is always sure of its purpose, and unfailing in its choice of agencies for producing it. We need not enter more particularly into this doctrine of final causes at present, because, as we shall soon see, it breaks down under the light of the Darwinian disclosures, and is transformed into another law, in which the whole of the teleological principle in animal life virtually disappears.

Having treated of the unconscious, as it operates through the whole phenomena of organic life, Hartmann proceeds to what he terms *the relative unconscious*—*i.e.*, the unconscious operations of the *human mind*, as seen in instinct, in the love of the sexes, in the feelings, in individual character, in artistic productivity, in the spontaneous formation of language, in association of ideas, in our fundamental conceptions, in human history and human life. In all these phenomena of the human mind, there is a conscious and an unconscious element. Our instinctive actions appear to flow from some hidden depth of our nature, which we cannot penetrate by the light of reason; the power of love between the sexes rushes upon us from a deep-seated spring of emotion and impulse, which reason can neither comprehend nor control; the peculiarities of character, which every man more or less manifests, come to him he knows not *how* or whence, but come they do, welling upwards from the great ocean of unconsciousness into the light of day.

Even our fundamental ideas and our associations come to us all spontaneously; while, turning from man regarded individually to man viewed in the aggregate, we find language producing itself, and attaining the highest forms of power and beauty, with a perfectly unconscious spontaneity, and human history working out all the great problems of man's existence, on a plan which can only be known in the retrospect, when well-nigh all the agents who blindly produced it have passed away into oblivion. 'The conscious reason (as our author expresses himself) is only negative, critical, controlling, directing, comparing, and combining, but never creative, productive, inventive; in these latter respects, man depends wholly on *the unconscious*, and if he loses the unconscious, he loses the well-spring of his life, and has to drag out his being amidst the uniformities of the *general* and the *particular*. For this reason, the unconscious is indispensable, and woe to the age which forcibly represses it in favour of *conscious intellect;* for it must then fall into a mere shallow rationalism, manifesting itself only in a childishly senile keenness of intellect, like what appeared in the age of the *Aufklärung*. Never should we repress the tender germs of our *unconscious inspirations*, but listen to them with pious devotion, and nourish them with a loving phantasy.'

But, alas! for all this 'pious devotion,' the *relative unconscious* turns out to be as great a mistake as the physical unconscious; the inexorable march of the Darwinian doctrines shows that, so far from there being a quasi-unconscious *Deity* which prompts our mental instincts, our higher feelings, our individual character, our artistic flashes of genius, our fundamental ideas and the whole flow of human history, all these things, and a great many more, are fully accounted for by the wonderful law of hereditary transmission, and the gradual accumulation of power in any special direction under the force of natural selection. The doctrine of final causes thus falls to the ground, and with it the only remaining proof of the existence of God.

'The philosophy of the unconscious (says the author), as being the last possible attempt to save the doctrine of final causes, is at the same time the last possible attempt to

conserve the belief in a God, although in a scientifically modified form. Theology has naturally enough not been aware of this, but when centuries have rolled round, perchance she will cite the "philosophy of the unconscious," as the *last prop* of her doctrines. A poet of the future will then perhaps sing an elegy over our God-forsaken world, as Schiller sang the God-forsaken world of Hellas, but without even wishing, if it were possible, to *restore* the lost, by a poetical lament over the vanished charms of a childish faith-world; for science will have been still marching on, and have given a deeper insight into nature, and proffered to the world a more precious boon than the dreams out of which it so *ruthlessly* awoke it.'

I will now attempt, by means of a free and abridged translation from the explanation given in the last work published by Hartmann (*Das Unbewusste vom Standpunkt der Physiologie und Descendenztheorie*, 2d edition, enlarged, Berlin, 1877), to convey some idea of the system of philosophy developed in these latest utterances of the author.

NATURE IN RELATION TO MIND.

Before mind begins to be distinctly conscious of itself, it lives *for itself.* The satisfaction of their purely natural wants is the great aim of the unreflecting. This finds its end in the family and in the state. The desire for gain, for example, has its end in the comfort of family life; the desire for honour, in the furtherance of the common weal. It is therefore his living for the purposes of *mind* which gives to man his position in nature.

But so soon as the philosophic consciousness awakens, the notion comes more and more to light, that man, strictly considered, lives ONLY in and for *mind*, that his *specific* life is the life lying within the sphere of his consciousness, and this can be no other than purely *mental.* Man knows *immediately* only what exists in his own consciousness; he feels nothing but his own feelings, perceives nothing but his own perceptions, thinks nothing but his own thoughts. The idealistic philosophy, indeed, recognises nature only as a phenomenon produced by mind, which is different for every individual, and wholly independent of the consciousness

of our fellow-creatures. From this point of view, the laws of nature can be no other than the laws of mind—laws, *i.e.*, by which the mind produces for itself all these subjective phenomena; and the philosophy of nature can be in this case only one department of the philosophy of mind. But, however untenable this subjective philosophy has now shown itself to be, there is *one truth* about it which cannot be gainsaid—namely, that, immediately considered, we can only know our own mental life. On the other hand, every man's *natural realism* has its own justification in this, that there is one and the same *real nature* for all—one which exists and acts *according* to its own laws, wholly independent of the laws of mind. Both these truths are united in the transcendental realism now advocated, which maintains that we perceive in the phenomenal world only the reflex of nature in our own minds, and can only infer the constitution and the changes of nature indirectly from the constitution and changes of our own consciousness. This point of view is not merely the only tenable one, but is at the same time the only *workable* one for natural philosophy, and on this account is already finding wide acceptance amongst natural philosophers themselves.

By the light of transcendental realism, the common opinion of natural philosophers—that their particular science has the advantage in *certitude* over the philosophy of mind, is completely shown to be a false prejudice appertaining to common everyday realism; for we well know that nature—*i.e.*, the real nature, with which alone science has to do—is out of the reach of our consciousness, and can never be the object of *immediate* experience. Every utterance of natural philosophy respecting the constitution and laws of nature, rests upon *inferences* drawn from our own *mental* experiences. On the contrary, the moral sciences need not relinquish the sphere of *immediate experience* in order to find entrance into their own peculiar province. Experience, accordingly, is not only the foundation of the moral sciences in the same sense as it is of the natural sciences, but the absolute certainty of immediate experience attaches to the elements of the *former*, just in the same way as the latter has imagined it incorrectly to belong only to itself.

MIND AS THE KEY TO NATURE.

What, then, is this 'nature' thus indirectly revealed to us? A great fly-swarm, here thicker, there thinner; here faster, there slower—all whizzing through each other; and the flies are extensionless points or atoms. Can anything be *drier*, more uninteresting, more uniform, more indifferent, than this ghostly swarm of mathematical points? What can be poorer than such a stereometric world—the merest abstraction of our idea of quantity, in space, time, and motion?

That which first gives the possibility of *real* existence to this abstraction, is the idea of *power*, which converts the dancing atoms from mere points in space to real working individuals.

If we now consider attentively the 'nature' so arrived at, we see at once that all we ascribe to it consists of *ideas* carried over from our own minds. Reality, existence, substance, etc., are categories by which we think; space, time, motion, are forms by which we perceive. We should never have come upon the idea of *power*, if we had not generalized our own will; and the very idea itself is unintelligible unless we tacitly or otherwise lay the idea of will at the basis. Power and sensation, under the form of will and conception, are the elementary ideas of mental philosophy; and if it is they which breathe energy and life into the abstract space relations, it becomes evident that we can only conceive of a real living nature after the analogy of our own minds. If any *one* or both of these elements, thus borrowed from our own minds, are lost sight of, or regarded as mere anthropomorphisms, then there is really no *nature* left, and the so-called philosophy of nature must be thrown, together with alchemy, astrology, and theology, into the lumber room of mere irrational illusions.

The result of all this must be self-evident to every philosopher who stands upon the platform of transcendental realism. No one can get out of his own skin. If nature is to us something *mediate*, something indirectly inferred from its workings upon the human mind, then the mind can understand nature only *out of itself*, and there is no other key to the comprehension of nature but the mind.

NATURE AS MEDIUM FOR THE MIND.

What, then, is the significancy to us of nature, which, as we said, can only be comprehended by the analogy of mind? Can a dull, colourless play of atomistic points in itself have any interest for us? Must we not rather shrink from it as from a ghostly dance of death? What can be less beautiful than such a nature, consisting of mechanical operations carried on by imaginary points of extension? Who can see the glories of the heaven except the mind? For it alone the morning *ray* brightens; for it alone the flower diffuses its odour; for it alone the harp makes melody. *Real* nature exhausts itself in the uniform dance of atoms, and all the glory which the enchanted mind attributes to nature belongs *to itself—i.e.*, to the glow which itself calls forth and creates as the subjective phenomenal world of its own consciousness. All the wonders of nature which the poets sing are wonders of *mind*, and brought forth by it alone.

Of what significance, then, to us is nature viewed simply as objectively real? It would be of *no* significancy unless it were through its agency that the mind is aroused to the production of its own phenomenal world, and thus to fill the empty forms of its own consciousness with all the riches of what it afterwards unfolds. Just as the electric spark is produced from the contact of several electric substances, so the life of the mind results from its connection with nature. It is nature which awakens in it the slumbering spark of self-consciousness, and brings it into contact with other minds. Consequently it is not nature *per se* which interests us, but nature regarded as the means for enriching our mental life. It is the mind, indeed, which produces in itself the beauty and fulness of its own subjective life, but it does not produce it purely *out of itself*; it is dependent throughout upon the effect which nature produces upon it. The harmony between them is mutual. But nature is the *prius*, the pre-condition of mind. Notwithstanding that she appears so bare and uninteresting in herself, yet it is her influence which draws forth the spark of the true, the beautiful, and the good from the slumbering soul.

This wonder only becomes intelligible on the supposition

that nature is formed from the first to be the birthplace and nursery of the soul. The miracle of nature is only explained on the principle that the soul has unconsciously there prepared her dwelling, *i.e.* on the principle of a teleological philosophy of nature.

This necessity of a teleological exposition becomes all the stronger when we consider that the unconscious mind during the world process has no other outlet except through the function of atoms; so that the original adaptation of nature for the production of the wonders of the spirit must be absolutely perfect and all-sufficient, and not stand in need of any immediate co-operation of the mind itself or any extraneous help.

NATURE AS A MANIFESTATION OF THE ABSOLUTE MIND.

'*From mind through nature to man*'—this is our motto. Not only the human mind, but the absolute mind is like Peter in a foreign country, so long as it is imprisoned in nature; *it* struggles to be free from the bonds of nature. The absolute, like the individual mind, only develops at first miserable fragments of the infinite riches of nature, which lie shut up in its unconsciousness.

No one will contest that all which comes out of the *Absolute One explicitly*, in the process of the world's development, has been contained in it *implicitly* from eternity. It is the very fundamental axiom of a monistic natural philosophy, that the world-essence or substance is the foundation of all conscious as well as unconscious existence, *i.e.* the foundation of all that is afterwards unfolded in mind as well as in matter. If the contents of the world of consciousness are seen to be infinitely richer than that of the world of matter, it only shows us that The Absolute has unfolded in nature but a very subordinate part of its riches, and reserved its own highest treasures for the development of mind. If we regarded nature without any reference to mind, The Absolute would certainly exhibit only what was unspeakably poor and meaningless; while, if you regard nature as a *medium* for the soul, we see there its most wonderful machinery, which fills us with astonishment the more we come to understand its whole plan of operation.

Just as by the study of the vibrations of the atmosphere, or of the ether, we seek to comprehend the causes of sound, light, and warmth, so also we can conclude that by the constitution of these vibrations the world-spirit has given origin to the means necessary for producing all the rich variety of the soul's subjective impressions.

Every system of natural philosophy which shuts its eyes to this truth, and, neglecting these relations to mind, estimates nature according to its own significancy, must of necessity fall into grave mistakes and a one-sidedness which distorts the true relations of the cosmic spheres. To whatever extent we fail to establish the fullest harmony between the philosophy of mind and the philosophy of nature, we may be certain that the results of the former will have to be corrected by those of the latter, and *not vice versâ*. This follows directly from the fact that nature is known to us only *indirectly* through the mind, while the mind is known to us immediately; and that the moral sciences have the benefit of this immediateness of experience over the natural sciences, and therefore possess a higher degree of certitude.

This relation of the two sciences evidences itself in history, inasmuch as the natural sciences have received no more powerful impulses to new theories and developments than those derived from the natural philosophy which has grown out of the philosophy of *mind*, and based itself on metaphysics. Thus it may easily happen that the natural sciences of any given period base themselves on a philosophy which is borrowed from an obsolete system of metaphysics. At the very time when the empiricism of Locke, the materialism of encyclopædists, and the rational theism of Wolff represented the reigning metaphysics of England, France, and Germany respectively, the natural sciences in all three countries were carried on under the influence of obsolete scientific ideas. And even now, although the modern German metaphysicians have long discredited the shallow rationalism which preceded them, the natural sciences remain under the influence of that same sensualitic system, and are only just beginning to recognise the Kantian reform. But to the metaphysicians of the nineteenth century they hold a purely *reactionary* attitude, and strengthen themselves

in this attitude by an appeal to the science of other countries, which has not yet got beyond the ideas of the eighteenth century.

THEORETICAL AND PRACTICAL IDEALISM.

Our specific German culture of this present day, in so far as it transcends that of other nations, rests entirely on the metaphysics of the nineteenth century. The ethics of Kant and Fichte, the philosophy of history of Hegel, the æsthetic and historic interpretations of Schelling, the natural philosophy and the pessimism of Schopenhauer—these are the main features of our peculiar German culture, on which the further development of humanity will depend for the immediate future. If a reactionary philosophy of nature succeed in destroying these elements of culture, or weakening their energy by undermining all faith in them, the inevitable result would be an irreparable loss to the human mind in ideal truth; and on this account the elevation of a one-sided philosophy of nature over the head of the modern idealistic philosophy of Germany, would not only be a grave error, but would bring with it a great practical danger. The theoretical ignoring of the true relation between nature and mind must necessarily bring with it a damaging result as to our view of the dignity of mind in its relation to nature. It is the duty, therefore, of all who really recognise the impassable gulf between the too common materialistic view of nature and the noble results of our higher ideal culture, to join their forces against these attempts to master the *spirit*, by the undue elevation of *nature*, and to fight the battle of *mind* not only against priestly domination, but also against the desecration of the universe to a mere *mechanism*.

MECHANICAL AND IDEALISTIC PHILOSOPHY OF NATURE.

So soon as the above-explained relation between mind and nature is properly comprehended, the understanding will find ample cause for abandoning its mechanical, nature-deifying opposition to a theoretical and objective idealism. If nature is in itself a thing so poor and unintelligent, there is no wonder if a philosophy which regards nature apart from mind becomes embarrassed when it discovers the

same ideas in both. But if nature is merely the window of the soul, or the medium through which it unfolds unconscious Being into consciousness, we only need regard it as the *machinery* adapted for this purpose in order to see how all the riches of the mind are prefigured and prophesied by it. Then, indeed, nature appears full of significance, since all the riches of the world of mind are teleologically pre-represented there. It is here quite indifferent whether all the phenomena of our conscious life arise from the hereditary accumulation of brain power, or whether any psychical functions enter into it which are not contained in the brain power as such. At any rate, nature is the instrumentality for the development of the mind; and so sure as objective idealism is a theory which evinces itself with perfect certitude in every mental philosophy which is not corrupted by a false view of nature, so certainly must it find recognition in every philosophy of nature, just in proportion as its eyes are not obstinately closed against that true relation of nature to mind by which the very meaning or significancy of nature in the constitution of the universe is explained.

It is a vain effort any longer to maintain and hold up the materialistic natural philosophy of the eighteenth century, which considers mind as a fortuitous appendix to nature, of no further interest to the man of science, instead of comprehending nature as the organon of the spirit. Just as vain is it, on the other hand, to fall back upon Spinoza, whose metaphysics, as being the first enunciation of the principle of identity, will always indeed be of inestimable value, but who, with all this, had no glimpse of the true relation subsisting between mind and nature. Inasmuch as he comprehended nature exclusively under the category of *extension*, and mind under that of *thought*, passing by the power of will, his philosophy of nature stiffened in a mere system of mechanism, and his philosophy of mind to a one-sided intellectualism; so that nature and mind stood virtually unrelated to each other. He thus developed the idea of identity into a mere abstract unity in the connection and order of *things* in nature, and of *ideas* in consciousness, and set up this abstract unity in place of a

real and living action and reaction the one upon the other. In this way he made it impossible to conceive what mind owes to nature as a condition of its development, as also the reaction of mind upon nature, and thus was unable to comprehend the whole significancy of nature as the medium for the realization of *idea* in the light of consciousness.

It is not Spinoza alone, but the synthesis of Spinoza and Leibnitz, which fashioned the philosophy of the eighteenth century. If the science of the nineteenth century wishes to go backwards instead of forwards, in order to find better supports, it must borrow from Spinoza only the fundamental idea of his 'monism,' or doctrine of identity; but it must borrow from Leibnitz its further development, for it was through him the philosophy of Spinoza gained its whole teleological meaning. If it really does this, and if it interprets the monadology of Leibnitz according to the light of our present scientific progress, it will then come to the point of view which I now wish to represent, and which is not materially altered, but only *enriched* on the side of mental science, by the philosophical development of Germany in the present century.

If we hold fast to the principle that nature forms the mediating link between the unconscious undeveloped mind on the one side and the conscious developed mind on the other, then we grasp two facts in one—first, that nature does not contain in itself its own significancy, but finds it only in that of which it is the medium, namely, *the mind;* and secondly, that the mind viewed as self-conscious and matured cannot be its own natural *medium.* If we fix our eye upon the latter fact without taking the former into account, the result seems altogether *materialistic;* but if we consider the former fact in connection with it, then the other not only loses its materialistic force, but tends even to the opposite extreme. Natural science confines itself entirely to the task of elucidating the dependence of our mental life upon natural processes; but natural philosophy has to remember that the significancy of nature lies just *here*, that it renders conscious life a possibility to the unconscious mind, and contains the lowest form of mental life in itself. The process of nature is the hard work by

which the mind comes to itself, and nothing more. The soul is the centre of nature, for out of the soul as *The Unconscious* nature streams forth, and towards the soul as conscious she ever tends. On this account I have called my philosophy of the universe *noocentric*, inasmuch as it can only be called anthropocentric provisionally, and *faute de mieux*, the human soul being the highest form of mind as yet known to us, in which it has come to the light of self-consciousness.

From the above fragments which I have culled from Hartmann's last writings on the philosophy of the uncon scious, the reader will probably be able, as far as the untranslatable German barbarisms will permit, to gain some idea of the *Weltauschauung* which it represents. He will see that 'The Unconscious' stands for what we should call the unknown substance,—power, life, energy, intelligence,—which constitutes the whole *being* and the whole *working* of the universe, mental and material. Previous to the Darwinian criticisms, 'The Unconscious' was the direct agent in shaping the phenomena of organism, life, instinct, intelligence; now these are mostly referred to secondary causes, and The Unconscious stands further behind the screen, shaping the primary laws by which these secondary causes operate. Schopenhauer took as his great primary agent and essence *the will;* but unhappily the will severed from thought and intelligence appeared to others a very insufficient agent to conceive and carry out all wonders of creation,—indeed, some irreverent critics termed it *das absolute Dumme*—the absolute and eternal stupid, *i.e.* blind power without thought or intelligence. 'The Unconscious' of Hartmann can hardly be termed *the absolute Stupid*, inasmuch as it unfolds itself gradually through nature from absolute ignorance up to absolute wisdom and knowledge; but whether the 'absolute Stupid' or the 'absolute Unconscious' can really in the long run assume the place in the human mind and soul which has down to the present time been filled with great and glorious conceptions of a personal Creator and a universal Providence, does not appear to us a matter of much doubt. That our theistic notions change and develope with the progress of science

and ethics, is a fact almost self-evident; but that our reason and moral nature will find satisfaction in any pantheistic or semi-pantheistic theories, such as those above explained, or that the German culture which has evolved them stands so high above that of other countries, in which the practical belief in personal Deity still prevails, appears to us to be the dictate of an overweening pride, much more than the sober conclusion of a reverent and truly scientific spirit.

THE END.





